THE

FOREIGN EXCHANGE COMMITTEE

ANNUAL REPORT

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CHAIRMAN'S REPORT

During 1988, the Foreign Exchange Committee focused much of its attention on matters of risk management and market practice. The issues the Committee concentrated on were either brought to its attention by Committee members or came to light as a result of policies or proposals of monetary or regulatory authorities.

A particular example of one of these latter issues was the Committee's continuing work in the context of the evolving Group of Ten guidelines for risk adjusted capital. These guidelines initially did not recognize the concept of foreign exchange contract netting by novation. In a letter to the Board of Governors of the Federal Reserve, the Committee argued that netting be incorporated. It was pleased to see that the Board's final guidelines reflected the acceptance of netting by novation. Netting involves some highly technical matters, not all of which are completely solved. Active market participants are therefore well advised to remain current on developments in netting.

One of the most challenging issues investigated by the Committee pertained to the trader - broker relationship and the use of "points." This practice raises questions about the broker's neutrality and about the potential for abuse After much study and lengthy deliberation, the Committee came to the conclusion that the only way to reduce the risks associated with points is to change the cultural environment in which individual traders and brokers work together. In this connection, a change in market pricing convention would be most helpful Specifically, the Committee believes that the circumstances giving rise to points would be significantly reduced if banks would not require brokers to have firm prices at all times and to substantiate them until changed or cancelled. Improvement in the dealer-broker relationship also requires direct management involvement and new internal procedures for all market participants. I urge you to read carefully and consider seriously the material on this important topic in this report.

Committee members also described a number of approaches individual institutions are adopting to enhance risk management.

The Committee prepared an interesting paper summarizing alternative forms for measuring and/or managing price risk. This paper proposes to get away from the traditional approach of establishing position limits for individual instruments. The objective of the proposed approach is to devise internal systems to communicate more effectively about the magnitude of price risk (the amount of money that could possibly be lost) between different levels of management and to aggregate risks across instruments within similar price-risk categories.

Another important risk management tool discussed by the Committee is a program covering the development of new products. Institutions using such a program find that it reduces losses associated with unforeseen difficulties because all areas of the institution, concerned in any way with a given new product, including operations, regulatory, legal, tax, *et cetera,* are brought together during the approval process. This technique allows management a balanced judgment about the desirability of the prospective product, as well as expected volumes, required resources, risks, costs and revenues The process sets clear audit standards and, when fully implemented, the aggregate of these programs provide an excellent basis for the preparation of budgets and the setting of risk limits.

All of the above and many other subjects discussed by the Committee are covered in great detail in this annual report. Also included are the guidelines for managing a trading operation, which I again urge managers to bring annually to the attention of all trading personnel irrespective of seniority

The Foreign Exchange Committee is a group of highly skilled professionals and managers representing expertise and experience in many different fields of finance Its discussions provide an opportunity for members representing various types of institutions to express their concerns and impressions of the foreign exchange market.

With this report coming at the end of my term as the Committee's Chairman, I would like, especially, to thank all members for their time and contributions. I also want to express my special gratitude to the Federal Reserve staff for their help and support.

Heinz Riehl

COMMITTEE'S ADVISORY ROLE TO THE FEDERAL RESERVE BANK OF NEW YORK AND OTHER OFFICIAL INSTITUTIONS

During 1988, the Foreign Exchange Committee served as a forum for the exchange of information between market participants and the Federal Reserve Bank of New York. It also served as a channel of communications from market participants through the Federal Reserve Bank of New York to other institutions.

In these Committee discussions, members representing various types of institutions were able to express their concerns and impressions of the foreign exchange market.

Risk-Based Capital Guidelines

One of the more important issues the Committee addressed during 1988 was the bank supervisory proposals for implementing a risk-based capital requirement. Since 1986, the Committee had taken an interest in regulatory proposals to develop capital guidelines that would take explicit account of the differences in credit risks incurred by banking organizations. It had submitted comments to the Federal Reserve on earlier proposals, reviewing both the broad principles of the proposal as well as the statistical accuracy of the proposed techniques for estimating credit risk for off-balance sheet items in general and foreign exchange contracts in particular.

At the beginning of the year, the regulatory efforts were centered on the Basle Committee on Banking Regulations and Supervisory Practices (Basle Supervisors' Committee), which was developing guidelines to be applied consistently to banking organizations within the Group of Ten (G-10) countries and Luxembourg. A consultative paper (the Basle Accord) had just been published in December 1987 which outlined the basic structure of a common framework that could be used to assess bank capital adequacy in those 12 countries. Bank supervisors within each of the participating countries were expected to circulate among banking organizations in their own countries more concrete proposals appropriate to the banking and regulatory structure in their own countries. In March 1988 U.S. bank supervisors offered their proposed risk-based capital guidelines for U.S. banking institutions, based on the Basle Accord.

New Capital Guidelines Reviewed

In reviewing these new proposals for risk-based capital guidelines, Committee members noted that many of the concerns they had expressed earlier had been addressed. Some members expressed disappointment, however, that the concept of netting by novation did not receive more favorable treatment either in the Basle Accord or in the subsequent U.S. proposal which was sent out for comment. Committee members felt this issue was of sufficient concern to warrant a Committee response to the 1988 proposal in order to seek acceptance of the principle of netting by novation. The Committee believed that, if it could share its experience with, and understanding of, netting by novation with the U.S. and other regulatory authorities working within the Basle Accord, the implications of netting by novation for credit risk in foreign exchange would be better appreciated.

The Committee, therefore, sent a comment letter to the Board of Governors of the Federal Reserve System recommending that the risk-based capital requirements recognize netting by novation for foreign exchange to the same extent as these netting arrangements have been recognized for regulatory reporting purposes. (This letter is reprinted on p. 16.)

The final form of the risk-based capital guidelines was published by the Board of Governors in January 1989. Like the earlier proposals, the final guidelines established a risk-based capital framework that incorporates measures of the credit risk of the banks' activities, including those associated with off-balance sheet exposures. The final guidelines encouraged multinational banking organizations to strengthen their capital positions, with a phasing-in of the risk-based capital standards through the end of 1992, at which time the standards become fully effective.

As published, the guidelines kept in place a number of the revisions made earlier and addressed in the Committee's 1987 comment letter. In particular, the maximum risk weight to be applied to the credit-equivalent amount of foreign exchange rate-related contracts was reduced. While direct extensions of credit to private sector obligors are generally assigned a risk weight of 100 percent, credit equivalent amounts of foreign exchange contracts involving such obligors are assigned a maximum risk weight of 50 percent. This change is consistent with comments received from the Committee and others about the high quality of credit risk of participants in the foreign exchange market. The Board of Governors indicates that it will continue to monitor the quality of credits in these markets and might consider assigning a higher weight if circumstances warrant.

Netting By Novation Accepted

The final guidelines also reflected the acceptance of netting by novation. The Basle Supervisors' Committee, in considering the comment letters received by the G-10 bank supervisory authorities, agreed that novated contracts replace in law and in fact the contracts they have extinguished. The legality of novation netting is recognized under the bankruptcy laws of a number of countries. There were, however, questions about the enforceability of close-out provisions under the bankruptcy laws in some countries. These are highly technical matters not easily resolved. The guidelines therefore only recognized netting by novation for the purpose of calculating credit equivalent amounts of interest and exchange rate contracts. Although other forms of netting are not recognized at this time, the Board of Governors indicated that it will continue to work with the Basle Supervisors' Committee to assess the acceptability of other forms of netting.

Turnover Survey

Another one of the Committee's contributions during the year was to advise the Federal Reserve Bank of New York about the survey of turnover volume in the foreign exchange market to be undertaken by the Federal Reserve Bank of New York during 1989 in coordination with foreign central banks

The survey was redesigned to take account of significant structural changes that have occurred in the foreign exchange market since the turnover survey was last undertaken in 1986. Members of the Committee reviewed the preliminary survey questionnaire to provide guidance on its form and content. Members' comments focused particularly on clarification of the instructions.

The Committee also had specific suggestions regarding the inclusion of survey questions designed to provide an estimate of the volume of cross-currency activity and to capture information on direct dealing by investment banks. Views were divided as to whether the turnover survey should be conducted more frequently than the current three-year cycle.

COMMITTEE DELIBERATIONS ON MATTERS OF MARKET PRACTICE

During 1988, much of the Committee's deliberations on matters of market practice centered on management issues. As a starting point for these discussions, members found that the Committee's "Guidelines for the Management of Foreign Exchange Trading Activities" continued to prove useful. (These guidelines are reprinted in this report on pp. 38-45.)

Members also recognized the need for evolution in traditional market conventions. They felt that further discussions of market practices were warranted, particularly concerning the use of "points" by banks and brokers in deferring the financial effects of disputed trades in the foreign exchange market.

Furthermore the Committee's discussions of market practice, as in the past, also focused on recognizing and managing the risk exposures associated with a foreign exchange trading operation. The Committee followed progress being made on products to net foreign exchange contracts because of its interest in reducing credit risk as well as operational costs. The Committee also studied various techniques for measuring and evaluating price-risk exposure across different financial instruments. In addition, its discussions touched on the risks involved in introducing new products, in collateralizing foreign exchange dealings, and in valuing foreign currency options positions.

Transactions in the Brokered Foreign Exchange Market

One of the many challenging issues investigated by the Committee during the past year — certainly the most controversial and difficult to resolve — pertained to the use of points in the brokered foreign exchange market. The Committee has considered several times the difficulties that arise when a dealer discovers that a transaction he thought he had agreed to was not consummated by the broker at the agreed price. Failure to complete a transaction may arise under a variety of circumstances: a misunderstanding, cancellation of the price, an unacceptable name for the counterparty or an insufficient amount being presented to cover dealers' desired transactions.

Committee's Longstanding Concern About Points

When the Committee was preparing its February 1987 paper on "Guidelines for the Management of Foreign Exchange Trading Activities," it was aware that the practice of points had developed as one way of permitting brokers to resolve such situations. The Committee expressed reservations about this practice at the time and warned of the dangers of any practice "that, in effect, forces the broker in a role as principal to a foreign exchange transaction, of managing a foreign exchange position, or otherwise compromising the neutrality of the broker." (See 1987 Annual Report, p. 18.)

Notwithstanding these expressions of concern, market participants indicated to the Committee that points transactions increased in frequency in U.S. foreign exchange dealing, and some brokers on the Committee indicated that the amounts outstanding were at times sizeable. The Committee found itself, therefore, at risk of being interpreted as condoning the practice if it did nothing more to discourage its use.

Meanwhile, Federal Reserve Bank of New York representatives raised ethical and legal issues about the use of points at the Committee's April 8 meeting. (See p. 22.) As transactions involving points may not have been fully documented on institutions' books and/or conducted with management's knowledge, this trading practice had the potential of compromising the integrity of an institution's records and official reports. Moreover, the practice raised questions about the broker's neutrality and the potential for serious distortions to be introduced into the pricing mechanism.

Committee's Actions on Points During 1988

Believing that the points practice raised serious concerns, the Committee decided to assume an active role in promoting the implementation of prudential controls over, and limiting the practice of, points. It planned to draw on its members' foreign exchange expertise to develop suggestions as to how the market might operate more effectively. Members believed that, if the Committee were to develop recommendations for acceptable conventions for the resolution of disputed trades, then individual market participants might well choose to follow those recommendations.

On May 3, the Committee sent an information letter to a broad range of financial institutions, expressing the Committee's reservations about the practice of points and urging the immediate review of the respective institutions' procedures in this matter. (See p. 23.)

Establishment of a Points Task Force

The Committee then set about establishing a subcommittee to review this issue and recommend acceptable conventions for resolving disputed trades. It was decided, however, that it would be advantageous to take the somewhat unusual, but not unprecedented, step of expanding the composition of this subgroup to include individuals not on the Committee. As a result, the Committee established its Task Force on Points comprised of individuals whose experience in foreign exchange trading gave them the technical knowledge needed to address this issue. Some of the individuals chosen from banks were associated with members' institutions but were selected for their current involvement in foreign exchange dealing. Some were representatives of institutions not on the Committee, making possible, for example, the wider participation of brokerage firms. The Task Force was also supported by specialists to provide policy and legal perspectives. These specialists included Federal Reserve Bank of New York representatives; a member of the FOREX USA, Inc., who is also a member of Association Cambiste Internationale's Committee on Professionalism; counsel to FOREX USA, Inc.; and counsel to the Foreign Exchange and Currency Deposit Brokers Association of America, Inc.

Early in its proceedings, the Task Force identified three broad objectives for its review: collection of information, analysis of market practices, and development of recommendations for conventions for resolving disputed trades. In its findings, the Task Force determined that the most frequent use of points occurred when prices were missed, the largest points transactions tended to involve errors which resulted from miscommunications and misunderstandings that occurred during volatile market periods and which were discovered hours later.

Task Force Recommendations to Committee

In its recommendations to the Committee, the Task Force expressed a consensus view on several crucial points. It concluded that there should be full documentation and monitoring of all points transactions, efforts should be directed toward reducing the incidence of points, and periodic settlement by cash payment (or brokerage adjustment) was an acceptable compensation mechanism for resolving disputes. (See box on p. 8.)

Task Force members, however, remained divided in their efforts to identify the boundaries of acceptable market practice. There were several areas of disagreement, particularly concerning the magnitude of potential losses or benefits deriving from the use of points:

- The degree to which the market practice of points tends to increase market liquidity and the implication for the smooth functioning of the market if a points system were not in place,

- The extent to which the practice of points introduces distortions in the pricing mechanism and the magnitude of any opportunity loss imposed on banks by the repayment of points by brokers,

- The appropriateness of expecting brokers immediately to close out any positions they unintentionally assume when traders may hold and manage foreign exchange positions, and

- The competitive effect of changing market practice for brokers in the United States if corresponding changes do not occur in foreign markets.

Committee's Current Views on Points

After reviewing the Task Force report at a special meeting in January 1989, the Committee decided on more far-reaching solutions to the points issue than the Task Force had suggested. These solutions were based on two fundamental premises:

- Dealers, as market makers, are responsible for quoting prices at which they are willing to deal and are expected to be prepared to transact a reasonable amount with an acceptable counterparty at that price until the dealer changes or cancels his price. The ability of an individual dealer to assume a position in foreign exchange, subject to his management's policies and guidelines, supports this price-quoting function of dealers.

- Brokers are intermediaries whose principal function is to bring acceptable counterparties together at prices agreeable to both. Brokers' ability to provide dealers with credible and impartial service requires that market convention not force brokers to consent to assume positions in foreign exchange or to provide incentives for brokers to favor some dealers at the expense of others.

At a minimum, the Committee concluded that banks should establish an explicit statement of policy on how their respective institutions should proceed to reduce and resolve disputed trades.

More generally, the Committee favored a market convention for the quoting of exchange rates by brokers to the effect that brokers not be required to substantiate prices until changed or cancelled. Committee members noted that, in practice, prices are not always firm. Many dealers already recognize that the brokers cannot satisfy all desired transactions at the indicated price, and accept, instead, the next available price. They believed the problems of "missed prices" would be better resolved if all market participants were to avoid "stuffing" brokers. Moreover, the Committee believed it important to establish clear principles to guide market behavior. It hoped by so doing to avoid having to devise a mechanism for evaluating the acceptability of all the specific situations that arise.

Accordingly, the Committee concluded that:

- Bank management should establish clear policies against their dealers forcing brokers to accept transactions in which a counterparty has withdrawn its interest before the trade could be consummated ("stuffing") and to encourage the understanding that brokers are not required to substantiate prices.
- Brokerage firms should establish clear policies prohibiting position-taking by brokers and requiring that any position that may be unintentionally assumed be closed out at the earliest practical time.

The Committee believes that if the above policies were adopted, the major factor giving rise to points would be eliminated. The only remaining causes of disputed trades would be mistakes, misunderstandings, etc.

In dealing with these remaining situations, the Committee believes that two-way compensation for mistakes is appropriate, provided that the circumstances giving rise to compensation are fully documented and settlement takes the form of cash or the equivalent (such as an adjustment to the brokerage bill).

The Committee drafted a statement to this effect (see p. 34), which was circulated to market participants in the U.S. for their comments on March 23, 1989.

Summary of Task Force Recommendations on Documentation of Points Transactions

1. Immediately upon realizing that a problem exists, both the trader and the broker have the responsibility of closing out any residual market risk. This is a specific provision for a more general proposition regarding position-taking activities of brokers and dealers: Any time a broker is forced into a position the broker should close out that position immediately; any time a mistake occurs that puts a dealer in an unintended position, the dealer either closes out that position at the time the situation is discovered or takes full responsibility for any loss that may subsequently occur.

2. At the banking institution and at the brokerage firm, management personnel not involved in the original transaction producing the difference should identify how the difference arose and the amount involved in order to allocate responsibility for the difference. This procedure transforms the dispute from an individual trader-broker issue to an inter-institutional issue.

3. A written version of how the difference arose should be produced for the records of each firm.

4. The banking institution and the brokerage firm should exchange written confirmations of the amount of the difference and a date by which the difference will be settled. These confirmations should be sent to the area that normally handles confirmations with a copy to the principals involved. These confirmations should be the basis for creating accounts payable or receivable balances in the name of the banking institution or the brokerage firm involved.

5. Management should determine the level of exposure it is willing to accept *vis-a-vis* any firm and be able readily to identify the level of outstandings at any time.

6. Settlement of differences should take place on a regular basis not normally extending beyond the end of the following month.

7. Either the banking institution or the brokerage firm may request expedited payment of outstanding claims at any time.

8. At the time the amount of compensation is set, the amount of money involved in the settlement should be entered to an accounts payable or accounts receivable balance in the name of the brokerage firm or the banking institution, with an offsetting entry either to a foreign exchange profit and loss account or to an errors account.

9. Most differences arise in connection with spot transactions. Should a difference develop from transactions involving forward or term swap transactions, compensation should coincide with the term of the underlying transaction.

Netting of Foreign Exchange Contracts

During the past year, the Committee continued to pursue its longstanding interest in the netting of foreign exchange contracts.

As noted above, the Committee prepared a comment letter to the Secretary of the Board of Governors of the Federal Reserve System supporting the recognition of netting by novation in the risk-based capital framework, to the same extent that such arrangements have been recognized for regulatory reporting purposes. (See p. 16.) The risk-based capital guidelines, released in July 1988 by the Bank for International Settlements, largely reflected the Committee's views on the treatment of netting provisions.

Furthermore, the Committee attempted to facilitate a broader understanding of the principal attributes of various netting concepts, products and proposals. It was prompted to pursue this endeavor out of concern that many banks appeared to be either unaware of, or confused by, some of the particular features of different netting mechanisms The risk was that institutions may be adopting informal netting procedures that could mislead management and mask a bank's true risk exposure. Under some of these arrangements, a bank's net exposure may appear to be within prudent bounds while, in fact, there may be a very large gross credit exposure.

Two developments gave rise to this concern. First, during the autumn of 1987, FOREX USA, Inc., at its Senior Dealers' Conference, had distributed a questionnaire on foreign exchange netting practices of U S. banks. The results of that survey suggested a far greater use of cross-border netting than would appear justified, given the limited progress in establishing netting agreements that would conform with legal codes in different countries. The second was a questionnaire distributed to institutions represented on the Committee as to their netting practices A purpose of this second questionnaire was to shed some light on the significance of the FOREX exercise. A somewhat disturbing finding from this limited survey sample was that only about half of the participating institutions insisted on having formal netting agreements with their netting counterparties. Apparently, several banks were willing to initiate informal agreements with counterparties to net foreign exchange payments between themselves.

In order to identify the major attributes of the various netting arrangements and proposals underway at the time, the Committee established a subcommittee which conducted interviews with representatives of institutions providing, or proposing to provide, netting services The subcommittee also arranged technical presentations or briefings on certain netting arrangements. In reporting its findings to the Committee, the subcommittee made no recommendations favoring one netting product over another.

Meanwhile, the Group of Ten (G-10) central banks separately initiated their own study to evaluate the impact of foreign exchange netting arrangements on the efficient functioning of the foreign exchange market In particular, their study systematically assessed the contributions various netting arrangements could make to the reduction of counterparty and systemic risk The G-10 central banks published their detailed findings in order to heighten awareness of the legal, financial, and structural issues raised by different netting systems (A copy of the "Report on Netting Schemes," prepared for the Bank for International Settlements by the Group of Experts on Payment Systems of the central banks of the Group of Ten countries, is being sent with this report.)

Interest in Netting Arrangements

Interest in foreign exchange netting has increased as the volume of banks' outstanding foreign exchange contracts has expanded both absolutely and in relation to capital. Netting arrangements may, under certain circumstances, influence the efficiency of the foreign exchange market Incentives for banks to implement netting arrangements may derive from at least four areas:

- Banks may enter into netting arrangements to *reduce interbank payment flows* or the number of settlement payment instructions that are exchanged between counterparties in order to reduce transaction costs and operational expenses.

- Foreign exchange netting may *reduce counterparty credit risk exposure.* When entering into a foreign exchange contract, a bank incurs a credit risk that the counterparty may be unwilling or unable to fulfill its contractual obligations. A legally enforceable contractual netting arrangement may reduce a bank's credit risk exposure on its unsettled foreign currency transactions from a gross basis to a net basis on each separate forward date.

- Netting systems may *reduce the intraday liquidity requirements* used to bridge timing gaps between gross payments and gross receipts.

- Furthermore, the Basle Capital Agreement has provided a stimulus for the expansion of netting arrangements. In accordance with the Basle Capital Agreement, under certain netting arrangements, a bank may be in a position effectively to reduce its on- or off-balance sheet assets and/or liabilities

and thereby *minimize the amount of required capital allocation.*

Payments Netting and Contract Netting

There are two basic approaches that banks are adopting toward netting: Payments netting (in the sense of the netting of payments only) and contract netting. While these methods have certain operational similarities, they differ significantly in their legal and risk-reduction characteristics.

Payments netting refers to the netting of the amount of payments made between institutions. Two institutions that frequently trade with one another may find they have a sizeable number of transactions between them, with a given settlement date, and that some of these are offsetting. The two banks may agree not to proceed with each payment for each transaction but, instead, to make one net payment between themselves for each currency and value date. Such an agreement may be informal and *ad hoc.*

Payments netting may substantially reduce the number of settlement payments flowing between institutions, thereby diminishing the chances for processing errors. In addition, payments netting may reduce the amount of funds needed for routine settlement of transactions.

Payments netting does not reduce credit risk, however. The foreign exchange contracts giving rise to the obligations being netted remain in effect, and both parties remain legally obligated to settle for the gross amounts of their transactions. In the event of a bankruptcy proceeding, a liquidator retains the ability to choose among individual contracts and determine which will and which will not be honored. Therefore, the credit risks between the parties are unchanged. Certain forms of payments netting may be inconsistent with the Board of Governors' policy on risk reduction in large dollar payment systems.

Contract netting, by contrast, involves a written agreement to substitute net payment obligations for gross obligations such that individual foreign exchange contracts are replaced, or superseded, by a contract governing many transactions. Two banks may enter into a formal agreement under which one running net amount will be due between them for each future value date in each currency they trade. This is achieved by netting the second, and each subsequent, deal with the first for that particular date and currency, thereby cancelling the original contract for the individual transaction and incorporating the transaction into a new, "novated" contract for the net amount. With contract netting, interbank payment flows decrease. Moreover, counterparty credit risk is reduced from a gross to a net basis. A master netting agreement should have the effect of reducing credit risk from a gross to a net basis across all currencies and value dates.

Bilateral and Multilateral Netting

Payments netting and contract netting may both be arranged on either a bilateral basis, directly between two counterparties, or on a multilateral basis. Under multilateral netting, there is likely to be a single central clearing facility or agent. Net amounts due to or due from each participant *vis-a-vis* the clearing group as a whole are calculated and settled by monetary transfers from net debtors to net creditors. The clearing agent may be substituted as principal for each of the counterparties, with respect to each other counterparty and with respect to each bilateral transaction covered by the multilateral netting arrangement.

Legal and other problems with multilateral netting raise questions, for example, regarding the form of substitution of a clearing agent as principal to a transaction and the arrangements for the posting of collateral. In addition, anti-trust concerns are raised if participation were restricted to enhance the creditworthiness of the clearing facility, in lieu of high collateral requirements. Largely for these reasons, netting initiatives currently underway tend to focus on bilateral contract netting.

Netting Initiatives

Several approaches to netting by novation came to the Committee's attention, including proposals by FXNET and the Options Clearing Corporation.

FXNET, an English limited partnership, began implementing automated netting in London in May 1987. FXNET provides the model legal netting agreement and the computer software for the automated implementation of bilateral netting and close-out agreements for interbank foreign exchange dealing. FXNET-licensed system software may interface with a bank's own operations system in the confirmation and matching of foreign exchange transactions between two counterparties.

In New York, as of March 1989, two banks are actually netting through FXNET, two banks have completed the installation of the FXNET system and have begun training and testing, and another two banks are in the process of installing FXNET. Three additional banks have acquired, or have announced their intentions to acquire, FXNET licenses.

Early in the year, the *Options Clearing Corporation (OCC)* undertook preliminary efforts toward developing a multi-

lateral netting system in which each netting counterparty would net against a centralized clearinghouse Under this early proposal, a bilateral contract between participating trading parties would be extinguished and replaced by a contract between each of the parties and the clearinghouse The clearinghouse would be substituted for each party as principal with respect to the other, and the posting of margins would enhance the creditworthiness of the clearinghouse

A netting test conducted by the OCC in Ottawa during February 1988 demonstrated that multilateral netting offered substantial reductions in the level of outstandings and sharply reduced both the number and size of foreign exchange-related payments As the year progressed, however, the OCC redirected its attentions increasingly toward pursuing bilateral netting as various problems with multilateral netting proved difficult to resolve.

Price Risk Measurement

Another risk-management issue to attract Committee attention during 1988 was the development of a standard unit of measurement for price risk that could be used across a variety of trading instruments.

Since 1987, the Committee has taken an interest in the variety of techniques institutions have been using to assist senior management in monitoring trading risks and allocating bank resources in a manner that reflected both the market risks of the various instruments and the individual institution's resources and attitudes toward risk. The Committee intended to prepare a paper to discuss, in very broad and general terms, the types of approaches that were increasingly being employed to help manage exposures in foreign exchange and interest rate trading instruments, both on- and off-balance sheet. Given the technical difficulties of the subject, Committee members drew on experts from their respective institutions to assist in developing an appropriate analytical framework for this study.

While pursuing this study, the subcommittee came to appreciate that, despite general market consensus on main issues of risk measurement, significant differences exist among market participants on certain technical aspects of measurement systems These differences arise from the very diversity of the financial institutions engaged in trading activities, their organizational structures, and, to a lesser extent, the relative importance and use of individual instruments. The members of the subcommittee decided to recognize in its report important differences of methodology so that the potential readers of the report could choose the methods most appropriate for their institutions. The report that was finally approved by the Committee therefore differed from a preliminary draft, inasmuch as it did not include specific choices among alternatives illustrated by examples in a highly technical appendix. Instead, the final report provided an overview of the concept of price volatility measurement, rather than a rigorous mathematical framework, to convey to senior-level bank management the broad principles of using volatility-based position guidelines in evaluating risk across a variety of market instruments

New Product Development

The Committee's discussions also touched on the importance for financial institutions of establishing formal programs to control the introduction of new products. Such programs have become essential for managing successfully the growing number, and growing complexity, of financial instruments and services. Some member banks indicated that this is an area that has recently come under increasing regulatory scrutiny.

Before a new product can be marketed or traded, these programs require that detailed research and documentation must be completed. This helps to assure that all ramifications of the product are fully explored in advance of the product's introduction. Potential customers are identified; likely business volumes are estimated, minimum profit margins are set, and, as a result, revenues are projected These results are then viewed in relation to the aggregate risks associated with the product. Several types of risk (price, issuer, counterparty, etc.) may be associated with a given product and each is assessed. Plans are formulated for how such risks will be measured and managed. Furthermore, these programs require that all accounting, auditing, operational, legal, and regulatory issues must be examined and resolved. In the case of a new product which is a small variation of an already existing product, the process may be abbreviated. But some product memorandum is always necessary because even a minor variation can raise substantive issues.

A key benefit of these programs is that all of the relevant areas of the bank (such as legal, accounting, operations) are formally brought together in the approval process. This process is generally accomplished by having a special, carefully-selected committee established within the organization whose members must assess and sign off on the aspects of the product related to each of their responsibilities.

In addition to in-bank personnel, outside legal counsel, auditors, and consultants are often brought into the process The hiring of an outside consultant is particularly important when the trading and positioning of a product require mathematical models for the evaluation of price risk. Finally,

as a rule, several test transactions must be completed before the new product is approved for addition to the bank's regular roster of products.

Banks with these programs believe that the product's actual user, the manager of the business or trading unit, should have the lead role in guiding the new product through the approval process. In so doing, the product which is ultimately approved is more likely to be what the user wanted in the first place. Committee members also noted that, while the business manager must fulfill many requirements before introducing the product formally, the existence of these systems can actually speed and facilitate the product devel-ment cycle by assuring necessary support in a timely manner.

The functions which these systems serve go well beyond simply verifying that the new activity is likely to be sufficiently profitable, that associated risks will be manageable, and that all legal and regulatory requirements are met. The detailed documentation produced under these procedures subsequently serves as an essential guide and reference for everyone who may become involved with the product, including traders, operations staff, risk managers, and auditors.

Trading Against Collateral

In some of its other work, the Committee continued to explore the market practice of trading against collateral to offset the credit risk of foreign exchange trading. When a bank enters into a foreign exchange contract, it incurs a risk that the counterparty may be unable to fulfill its contractual obligations. To limit their credit risk exposure, banks may require that some customers pledge a minimum amount of collateral to enhance their credit standing.

Discussion at Committee meetings indicated that substantial volumes of trading against collateral may be taking place. The Committee assigned a subcommittee to explore whether trading against collateral was growing, the magnitudes and types of common transactions, what influence this form of transaction might have in the marketplace, and whether the practice could entail significant risks for market participants.

As a starting point to understand better the extent of this type of activity, several member banks of the Foreign Exchange Committee agreed to respond to a Committee questionnaire concerning types of transactions, types of customers, and the most common provisions for margins. Due to the small number of respondents, the results may not be representative of the market as a whole. The subcommittee made no attempt to draw wide-ranging conclusions from the limited survey information. The survey results did, however, point out that a significant number of Committee members engage in some trading against collateral. The currencies most frequently involved were German marks and Japanese yen. Clients were generally individuals and commodity houses. The major trading centers were London, Hong Kong, and Singapore. The annual volume of clients' transactions was generally in the $100-500 million range, with a small number of clients reportedly over $1 billion annually. The average number of clients reported by each institution varied, but averaged about 20. All of the respondents listed cash as the only form of acceptable collateral. Initial margin ranged around 10 percent, with additional or variation margin typically 5 percent. Most of the respondents marked positions to market at least once daily.

Options Valuation

The Committee believed that it might be able to provide useful assistance in dealing with some of the problems banks may have encountered in evaluating their foreign currency options exposures. In particular, the Committee started to explore the feasibility of centralizing the collection of options pricing information, perhaps with the Federal Reserve Bank of New York acting as the collection source, in order to develop benchmark rates that would provide a useful frame of reference for verification of month-end internal valuations independent of individual traders' prices.

A subcommittee was established late in 1988 to begin analyzing this topic. During 1989, the subcommittee expects to recommend operational procedures and mechanisms for implementing a proposal to develop market reference rates for a core group of currency option volatilities.

One of the issues the subcommittee will discuss is the frequency for the calculation and publication of reference rates. One approach is that month-end valuations are all that are necessary to provide a useful basis of comparison and generally satisfy the needs of bank management, auditors, and supervisors. Another approach is that daily publication might serve more directly and be more helpful because institutions do their month-end valuations at different times during the month.

Another issue the subcommittee will address is the availability and usefulness of some of the information that might be provided. Concerns were raised that traders might be reluctant to provide their subjective estimates of volatility to an outside organization collecting these data. Some questions were raised about the need for new benchmark rates because options price quotes were already available from other sources for the most important currencies for maturities ranging up to one year.

PROCEDURAL MATTERS OF THE FOREIGN EXCHANGE COMMITTEE

Six formal meetings of the Committee were convened for 1988.

The Committee also conducts meetings on an informal basis from time to time to permit guests to meet with the Committee. One such meeting occurred on September 9, when the Committee was pleased to have Mr. John Townend and Mr. Roger Meads, both of the Wholesale Markets Supervisory Division of the Bank of England, discuss the changes in the British regulatory environment following the implementation of the Financial Services Act. The visitors commented on specific regulatory changes affecting the banker/broker relationship. They noted the abolition of rules prohibiting the ownership of brokerage firms by banks and the requirements that banks deal only with recognized brokers. To avoid conflicts of interest, banks are still not allowed to deal through their own subsidiary brokers In addition, the two guests described the new capital adequacy rules for brokers.

The Committee also hosted an informal meeting in Los Angeles on October 13-14, attended by nine representatives from West Coast institutions, including four foreign banks.

Subcommittee Activities

The subcommittee studying risk measurement completed a major document that sets forth the broad principles underlying the concept of price volatility measurement for measuring and monitoring risk across a variety of financial instruments This document was circulated to market participants on April 14,1989 and is printed on p. 19 of this report. The subcommittee members include G. Douglas Grainger (Royal Bank of Canada), David Harvey (First National Bank of Chicago), Ron Levy (Marine Midland), William L Maxwell (NCNB), William Rappolt (Manufacturers & Traders Trust Co), Heinz Riehl (Citibank), and Michael Snow (UBS), assisted by Robert M. Mark (Manufacturers Hanover), Thomas Heffernan and Willene Johnson (Federal Reserve Bank of New York).

A subcommittee previously established to draft the Committee's 1987 comment letter on the risk-based capital proposal was reconvened to prepare a further comment letter seeking recognition of the principle of netting by novation. Working on this project were John Arnold (Morgan Guaranty), Kemp Mitchell (Security Pacific), William Rappolt, Heinz Riehl, and Gerhard Schleif (BHF). This letter is printed on p. 16 of this report.

The subcommittee reviewing collateralized trading completed its objectives during 1988. The findings of a questionnaire distributed to institutions represented on the Committee raised interesting and important issues concerning the market practice of trading against collateral to offset the credit risk of foreign exchange trading. The subcommittee consisted of James Borden (Chase Manhattan), John P. Caulfield (Continental Bank), Kemp Mitchell, and Owen van der Wall (Westpac), assisted by David Roberts (Federal Reserve Bank of New York)

Working this year on the study of foreign exchange netting were John P. Caulfield, G. Douglas Grainger, Richard M. MaGee (Tullett and Tokyo Forex), Christine W Patton (Manufacturers Hanover), and Lewis Teel (Bank of America), assisted by Peter Holmes (Federal Reserve Bank of New York)

Late in the year, the Committee also established a subcommittee, whose work continues, to study the valuation of foreign currency options. The subcommittee members include James Borden, John Caulfield, David Harvey, James W. Hohorst (Manufacturers Hanover), Lisa Polsky (Citibank), and Kumar Ram (Chemical Bank), assisted by David Roberts and Marcia Bailey (Federal Reserve Bank of New York).

The Committee also decided to establish a task force to study brokered transactions in the foreign exchange market. The Task Force consisted of members of the Committee as well as individuals chosen for particular expertise in this area or as representatives of major market participants in brokered foreign exchange transactions The report of the findings and recommendations of the Task Force is printed on p. 24 of this report. The Task Force included John Arnold, James Borden, Nick Brown (Harlow, Meyer, Savage), Douglas Broder (Coudert Brothers), Antonio L Bustamente (Marine Midland), Thomas Campbell (First National Bank of Chicago), John R Capuano (Lasser, Marshall), John Christopherson (Banco Portugues do Atlantico), Clement Cypra (Irving Trust), G. Douglas Grainger, David Harvey, James H Hohorst, Richard M. MaGee, Robert McCully (Harlow, Meyer, Savage), John Munley (Bankers Trust), Mark J. Rosasco (Citibank), Anthony J. Schiametta (Noonan, Astley & Pearce), Masahiko Tanaka (Bank of Tokyo), and Angelo Webber (Bierbaum Martin), assisted by Margaret L Greene and Peter Holmes (Federal Reserve Bank of New York)

Drawing upon the findings of the Task Force, the Committee prepared a letter, circulated to market participants on March 23, 1989, suggesting changes in market practices in the brokered foreign exchange market The letter, entitled "The Use of Points in the Brokered Foreign Exchange Market," is presented on p. 34 of this report

FORMAL MEETINGS OF THE COMMITTEE

Meetings in 1988	Schedule for 1989
February 5	January 5
April 8	April 7
July 8	June 9
October 13	August 4
December 9	October 13
	December 1

SELECTED DOCUMENTS

OF

THE COMMITTEE

COMMITTEE LETTER ON RISK-BASED CAPITAL GUIDELINES

REPORT ON PRICE RISK MEASUREMENT

DOCUMENTS ON THE USE OF POINTS IN THE BROKERED FOREIGN EXCHANGE MARKET

PROPOSED RISK-BASED CAPITAL GUIDELINES

April 14, 1988

Mr. William W. Wiles
Secretary
Board of Governors of the
Federal Reserve System
20th and Constitution Avenue, N.W.
Washington, D.C. 20551

Re: Risk-Based Guidelines: Foreign Exchange Netting Agreements

Dear Mr. Wiles:

The Foreign Exchange Committee is a committee which represents a broad range of participants in the interbank market, is sponsored by the Federal Reserve Bank of New York, and serves as a vehicle for discussing and communicating with the U.S. monetary authorities technical and policy issues relating to the foreign exchange market. This letter responds to the Board's most recent request for comments on risk-based capital guidelines. The Committee submitted comments to the Board on July 2, 1986 and May 27, 1987 on earlier proposals and is pleased that many of the Committee's suggestions have been taken into account in the Basle capital framework under which the latest proposed guidelines have been issued. The present comments by the Committee focus on one aspect of the proposed rules of particular relevance: the application of the guidelines to foreign exchange contracts, with special attention to the treatment of netting agreements.

The Committee recommends that the risk-based capital guidelines for foreign exchange contracts recognize the effects which certain obligations netting arrangements have on the obligations of the parties as a matter of law and fact. Specifically, we recommend that the guidelines be applied on the basis of the obligations resulting from netting by novation where the legal enforceability of the netting agreements are supported by legal opinions, without material diverse qualifications, with regard to the governing law and with regard to the bankruptcy law of each jurisdiction of the head office of the netting counterparties. Applying the foregoing principles, the Committee specifically recommends that the risk-based capital requirements expressly recognize netting by novation for foreign exchange contracts to the same extent as these netting arrangements have been recognized for regulatory reporting purposes. The Committee notes that the foregoing principles can be applied by each of the Basle supervisory authorities to achieve uniform standards.

As in the past, these comments represent a consensus view of bankers of the Foreign Exchange Committee. In view of the supervisors' objectives for increased uniformity in capital standards, copies of this letter are being forwarded to the Comptroller of the Currency and F.D.I.C.

The regulatory proposal on foreign exchange contracts

The risk-based capital proposal seeks to make regulatory capital requirements more sensitive to differences in risk profiles among banking organizations and specifically to take off-balance sheet exposures into explicit account in assessing capital adequacy The Basle capital framework focuses principally on the adequacy of capital in relation to credit risk. For off-balance sheet items a credit equivalent amount is determined and that amount is assigned to the relevant risk category according to the counterparty (or guarantor or nature of the collateral if relevant). The proposal applies to foreign exchange, interest rate and related contracts. Although this letter focuses entirely on foreign exchange contracts, some of the points made may be equally relevant, now or in the future, to the other instruments.

The treatment of foreign exchange contracts assumes that the credit risks associated with these contracts are generally not equal to the notional value of the contract. Rather, the cost to a banking organization of counterparty default on an interest rate or exchange rate contract is assumed to be the cost of replacing the cash flows specified by the contract.

As time passes and market rates change, the value of the cash flows that the banking organization is entitled to receive from the counterparty under the contract terms may exceed the value of the cash flows it is obligated to pay. If the counterparty were to default in such a circumstance, the banking organization would have to pay a premium to replace, or reestablish, the cash flows specified by the original contract It is this replacement cost that is the focus of the proposed guidelines.

As set forth in the current U.S. proposal, to determine the capital necessary to support their foreign exchange contracts portfolios, banking organizations are to calculate the credit equivalent amount by: 1) determining the current replacement cost of contracts having positive value on the

reporting date by marking them to market, and 2) adding to that amount an estimate (the "add-on") of the potential increase in credit exposure over the remaining life of all contracts by multiplying the notional value of all contracts by specified conversion factors.

The Committee recommends that banking organizations be permitted, under appropriate conditions, to take account of legally binding netting agreements in determining the replacement cost of a contract and the "add-on." As explained more fully below, the capital guidelines otherwise would overstate the replacement cost of these contracts and thus the credit risk. The resulting application of disproportionately large capital requirements would discourage banking organizations from pursuing sound risk reduction policies for foreign exchange and similar products.

How Foreign Exchange Netting By Novation Works:

Netting by novation, which has become a frequent practice in the market place, provides for the offsetting of mutual obligations between counterparties. Under netting by novation, the legal obligation of a party to make payments for the original, individual contracts is extinguished and is replaced (legally, a "novation") by the obligation to pay or receive the single net amount due under the netted novation contract per counterparty, per currency, per settlement date.[1] Novation, in replacing the original obligation with a new contract, removes the ability of a liquidator to pick among the original, individual contracts to perform those favorable to the bankrupt counterparty, while refusing to perform the unfavorable ones. Novation unambiguously reduces payment and credit risk by legally cutting the amounts due from one party to another to the netted amount The following table shows the effect of netting on counterparty risk for unperformed contracts, each of which has a settlement date of March 28, 1988

Contract Details (in millions/rounded for ease of reference) (+)-Purchases / ( )-Sale of Currency					Contract Value on a Mark-to-Market Basis	
Deal Date	Contract Number	DEM Amount	Contract Rate	USD Amount	DEM/USD 1.7800 Market Value at Mar 20 '88	Gain/(Loss) of Revalued Amount vs Contract Amt
3/24/87	1	(390)	1.6243	+240	+219	21
12/12/87	2	+198	1.6603	(119)	(111)	(8)
3/15/88	3	(119)	1.8634	+64	+67	(3)

Using the above contract specifics, Bank "A" assumes the following credit exposure on a non-net basis and Bank "B" assumes the following exposure on a netting basis:

	Without Netting Bank "A"	With Netting Bank "B"	Percent Reduction
Contract Exposure (or USD equivalent)	423	185	56%
(Credit Exposure (as of March 20, 1988 On Mark-to-Market/Replacement Cost Basis)	21	10	52%

Bank "A" *Credit Exposure Without Netting*: In the case of a counterparty bankruptcy, prior to maturity of March 28, 1988, Bank "A" would not be able to affirmatively determine what its total position and credit exposure would be Bank "A" is essentially susceptible to a period of uncertainty during which time the liquidator could pick and choose those contracts favorable to the bankrupt party. Only when the liquidation proceedings have been concluded, will Bank "A" be able to quantify the exact exposure. However, if at a point in time (for example: March 20, 1988 as shown above), the contracts rejected by the liquidator were determined, "without netting," Bank "A's" total credit exposure would be $21 million based on the $423 million absolute aggregate value of the outstanding unperformed foreign exchange contracts on the books. This represents the profitable con-

[1] This should be contrasted with payments netting which nets the amounts of payments owed between institutions, but leaves in effect the contractual obligation for the un-netted amount.

tracts[2] on Bank "A's" books that would not be honored by the bankrupt counterparty, therefore, causing Bank "A" to pay a premium to replace, or reestablish, the cash flows for that settlement date, specified by the original contracts. Additionally, the liquidator could require performance on the other two contracts which represent a profit to the bankrupt party, $11 million ($8 million plus $3 million), i.e. contracts resulting in a loss on Bank "A's" books.

Bank "B" Credit Exposure With Netting. In this case, Bank "B" can easily determine its exposure because "netting by novation" specifically defines the amount of credit risk on an ongoing basis. The total credit risk, based on the net contract obligations of $185 million in the same example, would be substantially reduced to $10 million or by 52% (net profit on Bank "B's" books). Essentially, there can never be negative credit risk. Credit risk is only present in the event that mark-to-market/replacement cost is of positive value. As such, the measure of net credit risk on the netted obligations is the net profit from all deals per settlement date. Thus, netting significantly reduces credit risk by limiting replacement cost of the contract should a default occur.

Netting by novation has additional benefits. Using actual data obtained from a leading U.S. bank, the following table shows outstanding obligations and the number of deals over 10 consecutive trading days in early 1988 with 10 of its largest banking counterparties.

	Without Netting	With Netting	Percent Reduction
Total # of Deals	1,101	1,101	N/A
Total USD Amount	9.459 Billion	2 120 Billion	78%
Total # of Payments	2,202	946	57%

In the example above, the 2,202 payments in the amount of $9.459 billion equivalent has been reduced 57% to 946 payments for a total amount of $2.120 billion. Additionally, integral to netting is a process of matching and confirming transactions (usually electronically) immediately following each transaction, which leads participants involved to early resolution of discrepancies.

Netting Arrangements

With banking organizations worldwide developing a growing awareness of the payment and credit risks in foreign exchange products and on the costs of processing payments, foreign exchange obligations netting arrangements are increasingly used by international banks. Within the interbank market, for example, is an arrangement in the London market among 15 banks from four different countries whereby foreign exchange transactions are netted bilaterally among the participants.

As noted above, the legal structure for such arrangements is netting by novation. Authoritative opinions have been obtained from U.S. and English legal counsel (including an opinion of Queen's Counsel) that the foregoing foreign exchange netting agreements would be binding and enforceable under the laws of the U.S. and the State of New York, and under English law, including the bankruptcy laws of the respective jurisdictions. (Authoritative opinions also are in the process of being provided by qualified Swiss and Japanese legal counsel.)[3]

After reviewing the foreign exchange netting by novation agreements, the U.S. federal bank regulators and Bank of England have agreed that, for regulatory reporting, foreign exchange contracts covered by these agreements can be reported on the basis of the contractual outstanding amount, arrived at by obligations netting as of the reporting date. That is, the obligations resulting from the netting would, in fact and law, represent the gross amount of outstanding commitments and contracts at the close of business as of the Call Report date [4]

Attached as Exhibit A is the relevant correspondence from the Federal Reserve Bank of New York and the Bank of England.[5] The Committee recommends that the risk-based capital requirements expressly recognize netting by novation for foreign exchange contracts to the same extent as these netting arrangements have been recognized for regulatory reporting purposes.

Very truly yours,

Heinz Riehl
Chairman

[2] "Profitable" in this context is not meant as profitable in the P&L sense because usually there is an offsetting contract that the contract that is "unprofitable." Instead, "profitable" means that the rate is more favorable than the prevailing market rate.

[3] The foregoing arrangements specifically address FX contract exposure risk on a bilateral basis. Discussions are underway in a number of forums to move towards multilateral netting arrangements, such as through a clearinghouse structure. Multilateral netting arrangements can reduce obligations and payments to a single payment/receipt in each currency per settlement date amongst all participants in the arrangements.

[4] The netting agreements also typically contain close-out provisions in the event of bankruptcy, insolvency or default. In the event of close-out, obligations in various currencies would be accelerated, converted into a single currency by marking-to-market the replacement costs, and netted to a single amount. These provisions can further limit risk on the contracts. The regulators stated that they did not permit the contracts to be reported on the basis of the close-out amount since the parties would not intend the contracts to be closed out in the normal course of events.

[5] [See pp. 52 - 53 of Foreign Exchange Committee Annual Report 1986 for text of letters.]

PRICE RISK MEASUREMENT

Introduction

The purpose of this paper is to provide an example of a framework within which the price risk arising from the trading of and positioning with diverse financial instruments may be measured on a uniform basis. Banks have been trading an increasing array of products, many of which have complex risk profiles. Therefore, the aggregation of the dollar size of positions across differing instruments and currencies is becoming increasingly less meaningful as a measure of risk: a $1 million long Treasury bond position embodies significantly different risk than a $1 million long option position on Japanese yen. Rather than measure risk by dollar volume, the approach suggested here is to measure risk as the potential loss that would arise from an adverse movement in prices or rates.

Once a potential loss measurement system is established, the resulting risk measures may be used in a variety of applications Management may use the price risk measures in conjunction with estimates of potential loss arising from credit and operational exposures to help determine resource allocation among profit centers and/or capital adequacy of the consolidated organization. Similarly, price risk measures may be used to set a hierarchical system of risk-sensitive position limits for functional units, profit centers or the consolidated institution. In addition, the measures may be used to communicate to senior management and directors the general levels of price risk incurred.

Underlying all of these applications is the articulation by management of its tolerance for loss in quantitative terms. For example, an institution may specify its tolerance for loss in this way: it hopes not to incur a trading loss greater than $1,000 more frequently than one day in 40

A common precept of risk measurement systems is that risk is a direct function of the price volatility of an instrument or position. By taking account of the probability of price movements for a variety of instruments, a common denominator of price risk for these instruments can be established.

The development of a potential loss measurement system involves a number of subjective choices. First, a technique for estimating the volatility of future price changes must be specified Second, the degree of protection from extreme price movements should be chosen. Third, the period over which a trading position can generate a loss needs to be identified. Finally, the method of aggregating risk measures across trading areas must be determined.

The framework outlined below is intentionally broad and it is *only one of a number* of statistical techniques that could be used to assess potential loss Ultimately, banks developing a potential loss measurement system should research actively the validity of the assumptions and conventions that they use as the basis of their systems, as well as the appropriate level of statistical rigor It should be noted, however, that *any* practical statistical technique to estimate future price/rate movements remains vulnerable to unprecedented events ("event risk") or market gyrations, such as the October 1987 stock market break. Thus, while potential loss measurement systems can be quite useful, they generally are not sufficient by themselves for risk control.

Methodology for a Risk Measurement System Based on Historical Prices

As described above, estimation of price volatility is a core element of risk measurement systems. Market participants and academics use a variety of techniques to estimate future price volatility. One approach is to use the volatility implied by options' prices. Theoretically, the implied volatility of actively traded options provides a consensus volatility estimate, which takes into account all currently available market information that might affect the future prices of the options' underlying financial instruments Many banks prefer this measure, when available. Alternatively, a future volatility estimate can be based on historical price movements The assumption embedded in this latter approach is that future price movements will approximate those of the past Simply for clarity of exposition, the historical price approach is used here to provide an example of how a risk measurement system might be structured.

A measure of volatility frequently used for this purpose is the standard deviation of price changes, a statistic that measures the degree of variability around an average value or trend. If historical data for a specific foreign exchange rate are available, it is possible to calculate this statistic. It measures the dispersion of price changes around trend and has some interesting applications for describing random events.

In particular, many random phenomena appear to follow predetermined probability patterns that can be described by noting the percentage of outcomes that deviate from the

average by more than one or two standard deviations. The example developed in this paper assumes that daily changes in prices of financial instruments conform to a normal distribution, so that 68 percent of the price changes will fall within plus or minus one standard deviation from the average and 95 percent of the price changes will fall within plus or minus two standard deviations. In other words, if this assumption holds and if daily market prices fluctuate in a manner similar to that of the past, on only one day out of six would a loss resulting from a potential price change on the financial instrument be greater than one standard deviation. Likewise, on only one day in forty would a price change generate a loss of greater than two standard deviations

Little can be said about the size of loss when the price change is greater than one or two standard deviations. Therefore, an institution using a potential loss measurement system should recognize that it is still exposed to extreme price movements. Even if all the assumptions underlying the system are appropriate, only the number of times a loss might exceed management's tolerance is predicted. The size of those losses is not. To get more protection from extreme price movements, a bank can specify its tolerance for loss in terms of larger numbers of standard deviations. But there is a cost for this higher level of protection.

Let's assume that the risk of loss to be measured is one that might be incurred as the result of adverse price movements overnight. The actual loss exposure period chosen should take into account the bank's ability to react to an adverse price change. The bank should consider how quickly it can respond to price changes by unwinding or covering an open position and the liquidity of the relevant market. This time period may vary across banks, across markets, and over time as market conditions change.

Once the bank has selected the measure of volatility, the desired degree of protection from extreme price movements, and the relevant holding period, the system can be put to work assessing the risk of individual instruments or price risk categories. Suppose the bank has a position of $100,000 in an instrument for which the standard deviation of daily percentage changes in price is 0.5%. According to the assumptions already spelled out, a loss might exceed $500 once every six days, and the loss could exceed $1,000 once every 40 days. If management wanted to standardize the expression of the amount at risk as a loss of $1,000 once every 40 days by defining such a potential loss as one Risk Measurement Unit (RMU), then the $100,000 nominal value position is said to be equivalent to one RMU -- a uniform measure of risk.

In this way a common standard can be developed using an RMU methodology which permits otherwise dissimilar instruments to be compared on an amount-at-risk basis.

RMU Application to a Portfolio of Instruments

The RMU Methodology is particularly beneficial to banks when used on a portfolio basis. Banks have portfolios that include a wide variety of instruments on both a balance sheet and off - balance sheet basis and with varying maturities. They may, for example, include in their portfolio municipal and government bonds, interest rate swaps, and foreign exchange rate swaps. For such a portfolio the RMU Methodology requires not only proper price volatility estimates for each instrument separately but also an analysis of the correlation (or similarity) of price action for the instruments within the portfolio.

The RMU's associated with a portfolio of financial instruments[1] generally are less than the sum RMU's associated with the individual components of that portfolio because of the benefits of diversification. Rarely do the values of different financial instruments move in tandem. Moreover, the effect of an adverse change in one instrument may be offset simultaneously by the effect of a favorable change in another. The effects of diversification need to be taken into account.

There are well developed approaches suggested by portfolio theory that indicate how these effects might be incorporated into a potential loss measurement system or RMU calculation. But consideration should be given to the extent that correlation, just because it is observed in the data, should be incorporated in the system. Consideration should be given also as to whether positions in, say, two instruments are managed independently or as a single cross-instrument position.

Statistical Caveats

Senior management should be comfortable with the confidence levels chosen for control purposes, the assessment of correlations within and between books, and the limitations inherent in statistical approaches. The statistical work should never be treated as a black box, but should be well understood by trading and senior management. Periodic reviews of the assumptions underlying the work must be conducted.

[1] Some banks establish RMU's not for each instrument but for a price-risk category like, for example, interest rate risk, net foreign exchange rate risk, and volatility risk.

Reviews are a particular necessity when the statistical system seems to be working, or "proven," for long stretches of time. Risk measurement systems or models which are statistically based can lull risk takers through positive feedback so that the trader may be tempted to risk ever larger amounts of money on the system. Decisions to increase risk taking appetites should never be predicated on the seeming success of the statistical risk measurement methodology being used.

Banks developing potential loss measurement, or RMU, systems should be aware that there are inherent vulnerabilities in the statistical techniques of potential loss estimation. Historical price movements, historical correlations, or current price levels may not be representative of future price action Further, future price changes may not fit neatly into the theoretical probability patterns on which these systems are based.

It is usually assumed that price volatility data capture the effects of variables such as maturity, market liquidity, etc At certain times, however, when it is perceived that one of the parameters associated with a financial instrument -- say, liquidity -- may not be fully represented in the price data, a judgmental adjustment might be incorporated into the RMU computation.

Options Risk

Options on financial instruments create unique types of risk. The variables that affect the price of an option include the price of the underlying instrument or commodity, volatility of the underlying instrument/commodity, maturity of the option, strike price, and risk-free domestic and foreign interest rates The combination of these variables on a single option can cause non-linear risk. For example, a price movement of 1 percent in the underlying instrument will generally cause a greater than 1 percent gain in the option.

It may not be practical to analyze all the types of price risks presented by options. Typically, banks manage and limit two important risk components affecting an option's premium:

- Changes in the value of the underlying instrument

- Changes in the volatility associated with that instrument.

Because of the unique risk profiles of options, a number of banks analyze the risk of these contracts apart from other financial instruments. The entire options portfolio can be revalued for several hypothetical adverse changes in rates and volatilities. RMU's could then be assessed on the basis of the resulting potential loss. In fact, it is possible to construct a grid in which the joint effect of adverse changes in the prices of the underlying instruments and volatilities are calculated on an options portfolio basis alone. The RMU's thus obtained are added to the sum of RMU's calculated for the rest of the bank's, or unit's, portfolio

Conversely, other banks that actively use options to increase or modify currency rate exposure, or actively make markets in options, seek to integrate the measurement of their options risk into the measurement of aggregate position risk. This involves the conversion of options' face values into spot "equivalents," (e.g., the amount of spot that would give rise to the same loss for a small movement in rates), using options' price sensitivities to small changes in prices of the underlying instruments.

Both approaches to options have strengths and shortcomings. The precise approach chosen crucially depends on the individual institution's use of options in the first instance.

Conclusion

A statistical approach to measuring price volatility can be used by banks to determine a common denominator of price risk for a variety of financial instruments. This potential loss measurement system or risk measurement unit (RMU) system can be used to express, with varying degrees of confidence, the price risk that a bank is taking. A number of subjective choices must be made by a bank developing such a system, and these choices impact significantly the estimates of risk. As long as this sensitivity is understood, such a system can be useful in communicating levels of price risk to senior management and to the Board of Directors. It can also be used effectively in the allocation of risk by product and by trader. Moreover, it can be used in the allocation of resources.

Remarks on the Use of Points in Brokered Foreign Exchange Dealing

April 8, 1988

Margaret L. Greene
Federal Reserve Bank of New York

The subject of "points" has come up in the discussions of this Committee. Just last month the Committee considered the possibility of establishing a subcommittee, to consist among others of traders as well as foreign exchange managers, to study the practice and make recommendations about this practice to the Committee

At the same time we in the Federal Reserve have been trying to learn more about this practice. We do not pretend to be fully aware of all of the ways points may be used and abused But we have gathered enough impressions about this practice to be, frankly, very concerned about it.

There is, first, the prudential issue that arises whenever transactions, of whatever type, are entered into by a representative of an institution and not explicitly recognized in the records of that institution. The institution's records cannot accurately reflect its dealings unless these transactions are identified, entered into some record keeping system, and monitored. The integrity of bank records is, of course, of concern to regulators, tax authorities, auditors, shareholders, and many others.

Second, there is the impact of this practice on the functioning of the market place. The practice of giving or taking points can distort the pricing mechanism and raises the question of how the obligations being undertaken are ultimately settled.

There is, also, the potential that a practice that is not under management control can lead to serious abuse. Taking some of the possible uses of points to their logical conclusion, it is clear that there is a real risk that the existence of this practice, as carried out now, opens the door to a variety of questionable, if not criminal, activities.

I have discussed my concerns about this practice with the Legal and Bank Supervision areas of the Bank. Our bank examiners share our concerns with these issues and will be asking questions about points in examinations of dealing operations. They will also raise this matter with other bank examiners in the United States.

Ernest T. Patrikis
Federal Reserve Bank of New York

Any banker or other participant in the financial markets should have some concern about transactions which are not only off the balance sheet but do not otherwise appear on the firm's records. It would appear that "points" constitute such transactions.

One major cause for concern should be that the transaction could have the effect of causing the related foreign-exchange transaction to be recorded on the bank's books at a price other than the true transaction price. This could mislead or deceive management or the bank's auditors and examiners.

Another major cause for concern might be that the bank's books might not accurately reflect the bank's financial position leading to inaccurate reports filed with supervisory agencies.

Of course, inaccurate books can lead to tax problems.

This practice has the potential to facilitate the individual trader deflecting profit on a trade away from the bank and to the trader for his personal gain This could amount to a misapplication of bank funds.

To the extent that a third party uses this practice as a means of rewarding a trader individually, questions can be raised as to whether this remuneration is consistent with Federal laws on gifts to bank personnel.

In recent years, bank supervisors have not been hesitant to use their remedial powers to deal with activities regarded as unsafe and unsound. This proceeding can culminate in the issuance of a cease-desist order, which can, at the regulator's choice, be either a confidential or public matter. In some cases, the supervisor can remove a bank officer from his position and order that the individual not be employed by any bank without the supervisor's prior approval. The desired end is to prevent an individual engaged in such practices at one institution, and who is dismissed, from then conducting the same activity at another institution.

What I have spelled out above should certainly give pause to anyone. It seems to me that banks would best protect themselves and their staffs by taking precautionary steps to curtail practices that have the potential to generate any of the troublesome situations described above. This can best be done through the imposition of effective controls by management.

Committee Letter On The Use Of Points With Respect To Foreign Exchange Transactions

May 3, 1988

Dear Sirs:

At a recent meeting of the Foreign Exchange Committee, concern was expressed about the use of "points" with respect to foreign exchange transactions. This practice comes into play, typically, when a broker cannot complete a transaction as originally proposed—for example, if a name proves to be unacceptable or if one party cancels a price shown to a broker as exchange rates move.

The Committee recognizes that, in any market, situations may legitimately arise whereby transactions cannot be completed or trades are in dispute. It acknowledges that a mechanism needs to exist to provide for a resolution of these situations that is both expeditious and fair to all parties. The concern about points is that, whereas the current procedure is expeditious, it probably is not fair and certainly is open to abuse.

As an example of how points may be used, assume that a dealer responds to a price for a foreign exchange transaction offered by a broker, but before the transaction is consummated the other party cancels his price. The dealer insists that another transaction be found at the same exchange rate. The broker might then propose an alternative contract at the then-current rate, but in the meantime the rate might have moved to the detriment of the dealer. In such an instance, the broker and the dealer might agree that the difference between the two contracts will be made up later. The amount owed to the dealer is expressed in terms of points on the exchange rate.

The practice of giving or taking points can distort the pricing mechanism in the market and contains the potential for abuse. These problems are more worrisome the larger are the positions and/or the longer is the time they are left open. Also, the existence of these positions may undermine the neutrality of a broker in his dealings with other banking institutions, leading the broker for example to favor certain dealers over others when offering prices.

The potential for abuse is all the greater if the procedures are such that an individual dealer's or broker's position in points is not subject to management's knowledge and control. As carried on today, dealers in many instances apparently keep track of their own positions in points, but their positions do not appear in any clear way as part of the records the dealers maintain for the bank. This practice raises questions whether an institution's records accurately reflect its dealings. The practice also raises questions about how the obligations being undertaken via points are ultimately settled.

The lack of explicit recognition of the obligations and credits accruing to the bank through points is extremely disturbing. The current practice has the potential to lead to a variety of unsavory, if not criminal, activities.

For its part, the Foreign Exchange Committee is reviewing this matter with the view toward developing a convention for resolving disputed trades and for providing compensation where appropriate. Whereas some members would prefer to eliminate points altogether, others would like to modify current practice to address the Committee's concerns.

In the meantime, the Foreign Exchange Committee strongly suggests that all banks and other institutions operating through the brokers' market in foreign exchange review their current policies and practices in order to determine:

a) If the institution should prohibit all dealing in points by its personnel If so, management should have controls in place to ensure that such a policy is in fact being observed, and arrange with the brokers a mechanism for settling differences.

b) If, when differences arise, the institution should permit dealings in points in a manner that deals with the Committee's concerns. If so, management should ensure that it can be kept fully informed of any points transactions, that these transactions are explicitly recognized in the institution's books, and that it has arranged in advance with the brokers it uses, a method for settling points transactions in cash. These objectives might be achieved, for example, by the broker confirming daily any points transactions and issuing periodic statements of points positions. Settlement could be arranged either by difference checks or by an appropriate adjustment to monthly brokerage bills. Under no circumstance should a trader request, or a broker agree, to lend points to another trader or otherwise facilitate a trader's effort to deal at an off-market price in order to hide a trading loss or inflate his profit.

The Commitee welcomes any comments you may wish to offer on this subject or participation by members of your staff in the Committee's review. Correspondence can be directed to the Foreign Exchange Committee, 33 Liberty Street, New York, NY 10045, to the attention of Miss Greene.

Very truly yours,

Heinz Riehl
Chairman

REPORT OF THE POINTS TASK FORCE TO THE FOREIGN EXCHANGE COMMITTEE
December 23, 1988

The Points Task Force was established by the Foreign Exchange Committee to review market practice involving "points" with the view toward developing acceptable conventions for resolving disputed trades and providing compensation where appropriate

In its letter of May 3, 1988, the Committee identified two general areas of concern regarding the points practices then in use It regarded as "extremely disturbing" the lack of explicit recognition in financial statements and accounts of the obligations and credits accruing to banks through points. It also expressed concern that the practice of giving or taking points may distort the pricing mechanism in the market, contain the potential for abuse, and undermine the neutrality of a broker in its dealings with banking institutions

The Task Force has discussed these issues on numerous occasions since it was established in late May. All members of the Task Force agree that more should be done to reduce the frequency of situations giving rise to points and that success in this objective requires that both the banks and the brokers make changes in their approach to or style of dealing All agree that forms of compensation settlement other than points may be acceptable, and alternatives are described in the attached report. Furthermore, all concur that if any points transactions are still executed, all transactions and all outstandings should be fully documented along the lines suggested in this report.

The Task Force tried to go further in its discussions to establish market practices that would deal effectively with all of the Committee's concerns. Unfortunately, the Task Force could not achieve this objective completely, inasmuch as there were strong differences of opinion among the members on basic aspects of market practice. In particular, opinions differ about how the costs brokers incur when providing an international pricing service should be distributed, as well as what are the responsibilities and privileges of different types of market participants. Since these issues are not technical issues, it is difficult for a body such as the Task Force — made up of representatives but not necessarily policy makers of their respective institutions — to resolve these differences.

This report is therefore submitted by the Task Force to the Committee with the intention of summarizing the Task Force's deliberations and presenting the important issues the Task Force tried to tackle. The report consists of two parts. The first describes the points practice. The second suggests recommendations the Committee might make to the market to reduce the frequency of points situations and to effect compensation for differences that may still arise.

Ten of the sixteen Task Force members could accept the report as both providing a fair description of the points practice and putting forth desirable recommendations. One of the ten accepted the report under qualification as described below. Of the six remaining members, two (one banker and one broker) accepted the descriptive portion of the report but not the recommendations. Four members (all brokers) rejected the entire report

As a result of this ballot, all of the brokers are on record as rejecting the recommendations. Brokers believe they should be able to use opportunities presented to them to reduce the costs they incur in providing an international pricing service and therefore that the points bank alternative, which is described but rejected in this report, be considered acceptable market practice. Most brokers found the description of points, though realistic, to be unfair because they feel it to be too negative in tone toward the concept of points.

Responding to the division of opinion, one of the bankers who accepted the report did so on the grounds that it was consistent with his institution's practice. He would prefer, however, that the Committee postpone action on the recommendations until a mechanism acceptable to both the bankers and brokers could be devised. One of the bankers that accepted the description but rejected the recommendations believed that no compromise solution was possible and a new approach needed to be found. He proposed that the Committee not put forward alternative compensation schemes. He would recommend, instead, that all points transactions be documented and all documentation be forwarded to some outside body to monitor bank and broker activity in points.

The Task Force would be prepared to work on further technical aspects of this issue if the Committee so desires. But the Task Force does not feel that it can make further

progress on the basic issues at this stage without, at least, further guidance from the Committee on issues that divide the Task Force.

INTRODUCTION

"Points" arise in the brokered foreign exchange market primarily as a means of dealing with problems that arise from missed prices, from miscommunications (because of international telephone communication links, language barriers, and imprecise terminology) and from dealer and broker errors. The use of points allows trades to be completed but defers the financial effect of the problem until a repayment is made either through points arising from subsequent trades or through explicit compensation (typically in the form of a check).

The circumstances that give rise to points are numerous. A typical transaction might start with a trader from a banking institution and a broker agreeing to a transaction at one price but the broker not being able to consummate at that price. If the transaction is subsequently covered by the broker at a rate ten points worse than the originally agreed rate, the trader and broker might undertake to record the transaction at the worse rate with the understanding that the ten points will be repaid by the broker in subsequent transactions.

Until recently, it was common practice in the U. S. foreign exchange market for points to be a matter of informal accommodation between individual brokers and dealers. Points typically were used without the full knowledge or involvement of trading room management. In virtually every instance, they were not recorded on the financial statements of either the banking institution or the brokerage firm.

The use of points is apparently unique to the foreign exchange market. The Task Force found no comparable practice in domestic money markets, options markets, metal markets, or swap markets.

The Task Force sought to develop recommendations aimed at addressing two general areas of concern. First, what can be done to reduce the frequency of situations giving rise to points. Second, what could be developed to make either the use of points or other forms of compensation settlement acceptable when differences do arise. Specific recommendations are presented at the conclusion of this report.

In general, with respect to the first concern, the Task Force felt that more could be done to ensure that every reasonable effort is made to avoid mistakes and misunderstandings in a market that depends on verbal communication in frequently fast-moving and hectic market conditions. The Task Force also believed that bank dealers could be more sensitive to the desirability of not acting in a way that forces brokers into points situations.

The Task Force considered a variety of practices that could be considered to deal with differences that arise. The Task Force unanimously concluded that, if a bank deals in points at all, failure to record points transactions leads to misstatements of financial records. If unrecorded points are outstanding, reports to managers, regulators, internal auditors, tax collectors and shareholders are inaccurate *Clearly, traders or brokers who allow unrecorded points transactions to be executed expose themselves to potentially significant financial, legal, and regulatory risks.*

There was a difference of views within the Task Force as to whether the practice of taking and repaying points leads to such distortions in the pricing process or to such an impairment of the broker's ability to service his customers fairly as to warrant eliminating the points practice altogether. Views differed with respect to the significance of pricing distortions that may occur and to the effects of changing market practices so as to remove such pricing distortions.

Nevertheless, most banking institutions that deal through brokers do so in a way that presumes, under normal conditions, that brokers will not initiate transactions that would yield profits to themselves, unbeknownst to their customers, that could be interpreted by others as representing self-dealing, or that entail incomplete disclosure as to their own interest. Task Force members, recognizing that brokers may be involuntarily forced into a foreign exchange position, assumed that brokers close out those positions immediately. The Committee, itself, has expressed "grave concern" about any practice that, in effect, puts a broker in a role as principal to a foreign exchange transaction or of managing a foreign exchange position.

Taking these considerations into account, the Task Force attempted to identify those compensation mechanisms that, in the first instance, would assure adequate recording of and management review of any authorized points transactions. The majority of the Task Force then identified as preferred practices those that would make it difficult for a broker to take advantage of one of his customers to the benefit of himself acting through a third party.

The Committee's letter noted the potential for abuse, including fraud, inherent in an informal system of financial compensation that has in the past existed apparently with

An Example of Points Creation

At 2:05 pm a broker quotes sterling at $1.6930/1.6935. Bank A hits the $1.6930 bid for £5 million. However, before the broker could let Bank A know, this price for sterling had been canceled by the trader who had originally proposed the trade.

When told that the price of $1.6930 was no longer available, the trader at Bank A insists on selling £5 million at the original price. But by now, 2:06 pm, the market for sterling had moved to $1.6925-1.6932.

The broker, fearing loss of the account, agrees to provide the transaction as requested He searches the market and finds a dealer at Bank B who is willing to buy from Bank A at $1.6930 and sell to the current bidder in the market at $1.6925 against a verbal promise from the broker to make good on the $2,500 loss which results from doing the two trades. In market parlance, this dealer has lent the broker 25 points.

little or no management acknowledgement or involvement. The Task Force did not attempt to identify individual instances of possible abuse.

BACKGROUND

A full discussion of points usage encompasses not only situations that create points, but also the methods used to extinguish points obligations between banking institutions and brokers.

How Points Are Created

By far the largest single source of points origination arises from missed prices or, to use a market phrase, "stuffs." A missed price situation generally occurs when a broker agrees to a transaction at a given price but, by the time the transaction is consummated, the counterparty has cancelled his interest. The broker may then agree to stand up to the transaction, either as an accommodation to a trader who insists that the broker should have been able to execute at that price, or as a way of building up a reputation for reliable service. (*See example.)*

Banks have come to expect that brokers provide prices to dealers only for "real" transactions — i. e., transactions proposed by other bank dealers. Such a system implies also that dealers keep the prices they propose to brokers alive for a reasonable period of time. The convention of quoting "firm" prices developed at a time when brokers provided service to a relatively small number of banks with whom the broker had close contact inasmuch as all the banks serviced by the firm operated in its home country's exchange market To enforce this principle, dealers developed the practice of "stuffing," or requiring a broker to deliver a transaction at a specified price even if the other party had withdrawn his interest so as to increase the risk to the broker of quoting a price unsupported by an underlying transaction.

Today, there still is the possibility that a broker may show a price to his clients without having a banking institution indicating its willingness to execute the underlying transaction. But, more frequently, missed prices occur through no fault of the broker. With increased volatility of exchange rates, dealers are quicker to cancel their prices. Moreover, with communication lines now linking foreign exchange brokers in many countries, a price may be cancelled overseas before the broker here realizes that the transaction at that price is no longer available. It is also true that these international telephone links make it possible for the price for any one transaction to be disseminated to hundreds of other institutions simultaneously. Under such a system of "price broadcasting," many institutions may attempt to act on a price at the same time, making it impossible for the broker to satisfy all interested customers.

Under these circumstances, it may no longer be appropriate for individual dealers to "stuff" brokers. The brokers already have an incentive to provide competitive service. Those brokers that let their clients down more than others will be seen, other things being equal, as offering less reliable support.

Bankers on the Task Force believe that there is in the United States an understanding that prices will be withdrawn and the amounts dealers desire at a price are not always available Several bankers stated that their institutions follow, at least formally, a policy of "no stuffs" Brokers mentioned, however, that individual dealers within an institution do not always abide by such a policy Furthermore, several banks not represented on the Task Force still do conduct their trading business on the basis that brokers are required to substantiate all deals

As a result of this discussion, the Task Force unanimously recommends that managements of banking institutions examine their policies concerning "stuffs," attempt to reduce the frequency of situations that give rise to points or differences, and monitor more closely the actual practice of their dealers in this regard

Points also arise from an assortment of miscommunications between broker and dealer, equipment problems, and errors regarding amounts, prices, etc. Mistakes give rise to the most costly differences. There are any number of reasons why mistakes are made. But the potential for error is increased by the use of sloppy or otherwise non-standard terminology, miscommunication, and the use of similar-sounding expressions.

According to a survey of the brokers on the Task Force, the following is a breakdown of the frequency of each type of cause and their respective contribution to the total number of points and to the value of points outstanding

	PROPORTION OF	
SOURCE OF PROBLEM	FREQUENCY	POINTS OUTSTANDING
Missed Prices	67 4%	52 6%
Mistakes	11 8	30 0
Terminology	4 0	3 6
Miscommunication	8.2	8 6
Telephone Equipment	4 4	2 8
Similar Sounding Words	4.2	2 4

The inevitable consequence of "stuffs," mistakes, and the other circumstances described above is that the broker is left with a position that has to be unwound. The broker might offset that position nearly instantly at the same price, or later perhaps at a very different price. Although any difference between the rate at which the position was acquired and the rate at which it was offset might be resolved in a number of ways, it has most frequently been the practice to create a points I O U between broker and dealer. In fact, a small number of banks make an active practice of borrowing and lending points These banks are referred to as "points banks."

The broker-dealer I O U that is expressed in points hinges on a gentleman's agreement that the obligation will be unwound in a timely fashion On occasion, however, according to market reports, points obligations were not always extinguished quickly and the sum of such obligations were substantial.

How Points Are Extinquished

Points balances can be reduced in a number of ways

Sometimes errors arise which are in the broker's favor In these cases, the broker uses the resultant points to repay points owed to a banking institution.

Sometimes situations arise in the market that entail an immediate arbitrage profit Brokers use these occasions to direct the profit to an institution that has lent points to the broker

It has been alleged that a broker might manage for a period of time an involuntarily assumed position or consciously initiate a position with the hope of realizing a profit that can be used to repay a points obligation Some brokers have told the Task Force that they have internal policies against their employees initiating positions. Whatever the specifics may be, such activity would be considered inappropriate to an entity presenting itself as an intermediary to market dealers

In order to take advantage of any of these circumstances, the broker has to interpose another bank (perhaps a bank to which it owes points) to realize the arbitrage profit on his behalf (perhaps to reduce the broker's points obligation)

Impact of Points on the Neutrality of Brokers

The quoting of prices through brokers' lines is an important aspect of the foreign exchange market in the United States The price acts as an invitation to do business When a broker quotes a bid or offer price to a dealer, he is in effect proposing a specific transaction based on the fact that another dealer has indicated his willingness to deal in that currency at that price for at least a certain amount

Brokers are therefore in a position to know about banking institutions' willingness to trade at particular prices before other market participants. In order that broker management can maintain the confidence of its clientele and the integrity of its firm's service, it must insure that its employees not take

An Example of Third Party Involvement in the Repayment of Points

The obligation the broker incurred *vis-a-vis* Bank B in the previous example may be repaid with one or more sets of transactions that produce a profit to Bank B's position of at least $2,500.

Suppose that later the same day, the market for sterling has changed to $1 7070 - 75. After waiting some time and having no execution on the trade, Bank C bidding at $1.7070 decides to take the offer at $1 7075. Simultaneously, Bank D offering at $1 7075 decides to hit the bid at $1.7070.

The broker, seeing one bank willing to buy sterling at a higher price than another is willing to sell, substitutes Bank B, as principal, to both sides of the transaction. Bank B earns $2,500 by buying £5 million at $1.7070 and selling the same amount at $1.7075 at the same time The original buyer (Bank C) and seller (Bank D) do get their trades completed, but neither has dealt at the price they originally indicated, having paid away the full spread on the transaction

advantage of this sensitive information at the expense of its customers. It is for this reason that many members of the Task Force expressed concern about the implications for brokers' neutrality if market practice permits brokers, at their initiative, to earn points from one party to repay another.

As seen in the example above, one of the types of circumstance that permits brokers to earn points occurs when one party is willing to buy at a higher price than another party is willing to sell. The consequence of this condition is that two transactions occur at the same time but at different prices, the difference representing an arbitrage profit on the two trades. Although the two banks ultimately deal at rates that are acceptable to them, they each incur an opportunity loss. The buyer of currency pays more than he originally wants to and the seller receives less, the difference going to the broker to permit the broker to repay his obligation to a third party.

Although this precise situation may not occur frequently in actual practice, circumstances do arise that afford profit opportunities for the broker. They may occur accidentally as a result of all parties involved not being fully aware of the others' willingness to deal at a given price These situations may also be the result of conscious action taken by either a principal or an agent to one or both of the transactions. The example does realistically illustrate, therefore, how some of the costs of "stuffing" and errors in the pricing process are shifted by brokers to banks without the banks being aware that they have incurred this cost. There is no way that any one bank can identify the extent that it may have borne these costs.

This example was used in the Task Force discussions to consider the responsibility of the broker relative to his customer. The question was raised whether, in such circumstances, the broker has a duty to bring to the attention of his customers that the currency in question could have either been bought at a lower price or sold at a higher price. On the surface, it would appear to be good business practice for any intermediary to the transaction to do so. Some members of the Task Force felt, however, that market convention does not require such an obligation from a broker. Several Task Force members argued that, if a more favorable rate is available at the time, the dealer may, depending on the circumstances, decline to deal at that more favorable rate As a result of this attitude of some dealers, brokers apparently do not feel obliged to try to provide better (less costly) rates for all of their customers when such situations arise.

Another question that arose was whether it is appropriate for brokers to benefit from these situations by being able to assign the arbitrage profit to an institution to which it owes points. Brokers in particular point out that, if dealers do not wish to adjust their prices to clear the market and dealers find counterparties at different rates simultaneously, a profit is to be made by some market participant. If the brokers cannot receive the benefit of that profit but, instead, have to determine how to allocate that profit among their customers, the room for showing favoritism may be even greater than provided under current market conventions.

Although the Task Force did not determine how all possible situations of this type might be resolved, one principle clearly emerged from this discussion: A dealer expects that under no circumstance should a broker interpose other parties to deal at his price for the purpose of repaying points in a way that would leave his transaction unexecuted.

The Task Force was advised that there are legal precepts, certainly applicable to brokers in other financial markets in the United States or other agents, specifically constraining these entities from earning secret profits as a result of their activities as an agent, from self-dealing, or from failing to disclose fully to their principals their interest in a particular transaction. It may be that the applicability of these provisions to foreign exchange brokers depends on the precise nature of the relationship between the banking institution and the broker in each transaction.

Nevertheless, it is difficult to avoid the conclusion that there is, at a minimum, an appearance of a conflict of interest in any situation in which a broker derives a benefit from a transaction undertaken on behalf of a banking institution, without that institution being in full knowledge of the broker's interest in that specific transaction. Moreover, the Foreign Exchange Committee has been on record repeatedly as expressing "grave concern" about any practice that, in effect, forces the broker in a role as principal to a foreign exchange transaction, of managing a foreign exchange position, or otherwise compromising the neutrality of the broker Several considerations support this position. Foreign exchange brokerage firms are often not capitalized to an extent appropriate to accept the risk of being put into those situations routinely. Banking institutions do not limit the amount of business they do through brokers based on evaluations of the brokers' credit worthiness and in other ways do not act as if they regard brokers as principals. Moreover, the price information bank dealers obtain from brokers could not be judged to be objective if brokers were to be seen as frequently benefitting from transactions going through them.

Points Usage

Use of points in this market has declined since the Foreign Exchange Committee's letter of May 3, 1988. The letter attracted the attention of management and encouraged a review of current practices. In response, a number of banks set forth explicit policies discouraging trading in points by their personnel

A clear implication of recent experience is that management attitudes and policies as well as other self-policing efforts within the foreign exchange community can have an important effect on the extent points are used in the market place. This observation is borne out also by comparing the frequency of points usage in foreign exchange markets abroad. Use of points is considerably lower in those centers where there is either a regulatory discouragement of points or a strong bias among market participants against the use of points.

Up to now points have been commonly used in Great Britain, even though the Bank of England recommends against their use and receives periodic reports from brokerage firms on the gross points position of each firm. The Bank of England in October issued for comment an elaboration of its position on points, and discussions are still underway in London on this issue.

RECOMMENDATIONS

Recommendations to Reduce Freqency of Points Situations

In considering ways to reduce the need for points, the Task Force took into account the following observations:

1. The situation most frequently giving rise to points is missed prices.

2. The situation giving rise to the most costly differences, and therefore the largest points transactions, is mistakes.

3. An important reason why the amount of points outstanding can be significant is that brokers feel they cannot stand up to even unreasonable demands of bank dealers for fear of losing an account, and they believe they do not get compensated when errors or differences occur in their favor.

There was widespread agreement among Task Force members about ways that point situations might be reduced.

A general conclusion of the Task Force is that senior management of both banking institutions and of brokerage firms should play a more active role in overseeing the banking-broker relationship directly. Foreign exchange trading management, for example, is responsible for identifying the brokers the institution will use to service its business and the terms under which that service is rendered. Banking and broker management alike should assure themselves that all of their employees are fully aware of and follow the institution's internal policies in this area and that they are fully trained in the proper practices of the market place. Failure of manage-

ment to take such an active role opens up the possibility for many costly errors or, even worse, gives individual dealers or brokers the leeway to impose unreasonable demands on others.

All banking institutions using brokers should designate a senior member of the management team to have direct responsibility for the relationships with the brokers it uses and to be available to intercede to resolve any disputed trades that occur.

Managements of banking institutions should examine their policies concerning "stuffs" with the view toward reducing the frequency of situations that give rise to differences in trades. The member of the management team taking responsibility for broker relationships should make clear to all trading personnel the extent and the circumstances under which it may be appropriate for those personnel to insist that brokers perform on prices that have been missed. This manager should also monitor dealers' actual practices in this regard

Managements of brokerage firms should insure that their employees do not take advantage of information considered sensitive to their customers, in order that their clientele maintain confidence in the integrity of the broker's service and bank dealers feel less need to enforce good pricing practices by "stuffing" brokers.

Training of the trading personnel should be evaluated to ensure that all are familiar with the practices and terminology of the market place as well as the procedures of the institution. Terminology is clearly a problem. Some mistakes occur and give rise to differences because of difficulties in understanding different accents or distinguishing similar-sounding words or phases. But the incidence of misunderstandings is too great to be attributable to this cause alone, and more needs to be done to reduce misunderstandings.

Trading personnel should be expected to use standard terms in dealing. The foreign exchange profession has standard terms, most recently codified by the international dealing association, the *Association Cambiste Internationale*. Personal forms of expression, no matter how amusing, cannot be effectively understood by all market participants in fast-moving, frequently hectic trading conditions. As a general proposition, if an error occurs between a trader and a broker and the two entities need to decide how to apportion the cost of the error, the use of non-standard terminology could be considered as one of the factors contributing to the error.

The process of confirming trades should be speeded up to keep the size of errors that do occur under better control. The cost of errors could be significantly reduced if, for example, banking institutions and brokers checked out their trades with one another at least twice a day — at noon and at the close — instead of only once.

When errors occur and differences arise, a mechanism to provide compensation should be in place. Such a mechanism must be both effective to the resolving of disputes quickly and even-handed, providing for payments to as well as from brokers where appropriate.

The Task Force noted that brokers expressed frustration in resolving problems with their customers The ultimate success in addressing difference situations in a more satisfactory manner depends on any new mechanisms being judged by market participants as broadly equitable

The brokers have recently established an association to provide a collective voice for some of their concerns and provide a mechanism for airing complaints at reduced risk of dealer retaliation against an individual broker. The brokers on the Task Force suggested that this association might bring to the attention of bank management abuses by traders that result in freqent points creation as the result of "stuffs" or errors.

If, after the formation of this association and the development of more effective working relationships at the management level, brokers remain reluctant to bring problems to the attention of their customer's management, there might be merit in considering the formation of a body or committee to serve as an intermediary to arbitrate disputes. Such a body could be established, for example, under the auspices of the Foreign Exchange Committee But for the time being, the Task Force believes considerable progress toward dealing with these situations could be accomplished if the following recommendations were accepted as market practice

Recommendations for Mechanisms to Resolve Differences

The first priority is to develop a market environment in which disputed trades are kept to a minimum and treated as exception items. For those disputes that remain, the Task Force attempted to identify practical ways to achieve prompt settlement and provide for an equitable system of compensation.

In evaluating possible compensation mechanisms, the Task Force considered first those mechanisms that assured that obligations of all parties would be fully documented,

in the financial reports of all participants. From that group of possible mechanisms, it identified those that would also make it more difficult for a broker to take advantage of one of his customers to the benefit of himself acting through a third party. The majority of the Task Force suggest to the Foreign Exchange Committee that these preferred compensation mechanisms be recommended to the market place as a whole.

The Task Force identified certain general elements of good market practice to be followed whenever a difference arises in a foreign exchange trade and regardless of the precise form of ultimate compensation. They are:

1. Immediately upon realizing that a problem exists, both the trader and the broker have the responsibility of closing out any residual market risk. This is a specific provision for a more general proposition regarding position-taking activities of brokers and dealers: Any time a broker is forced into a position the broker should close out that position immediately; any time a mistake occurs that puts a dealer in an unintended position, the dealer either closes out that position at the time the situation is discovered or takes full responsibility for any loss that may subsequently occur.[1]

2. At the banking institution and at the brokerage firm, management personnel not involved in the original transaction producing the difference should identify how the difference arose and the amount involved in order to allocate responsibility for the difference. This procedure transforms the dispute from an individual trader-broker issue to an inter-institutional issue.

3. A written version of how the difference arose should be produced for the records of each firm.

4 The banking institution and the brokerage firm should exchange written confirmations of the amount of the difference and a date by which the difference will be settled. These confirmations should be sent to the area that normally handles confirmations with a copy to the principals involved. These confirmations should be the basis for creating accounts payable or receivable balances in the name of the banking institution or the brokerage firm involved.

5. Management should determine the level of exposure it is willing to accept *vis-a-vis* any firm and be able readily to identify the level of outstandings at any time.

6. Settlement of differences should take place on a regular basis not normally extending beyond the end of the following month.

7. Either the banking institution or the brokerage firm may request expedited payment of outstanding claims at any time.

8. At the time the amount of compensation is set, the amount of money involved in the settlement should be entered to an accounts payable or accounts receivable balance in the name of the brokerage firm or the banking institution, with an offsetting entry either to a foreign exchange profit and loss account or to an errors account.

9. Most differences arise in connection with spot transactions. Should a difference develop from transactions involving forward or term swap transactions, compensation should coincide with the term of the underlying transaction.

The majority of the Task Force identified three preferred mechanisms for settling compensation between a banking institution and a broker. They are: (A) difference payments by check, (B) adjustment of brokerage bills, and (C) use of a compensation account.

Any of these mechanisms would permit, to the extent mutually agreed between the two parties, that differences arising to the benefit of one party could be offset by differences arising to the benefit of the other as long as the circumstances giving rise to each difference is duly recorded, approved and ultimately settled as suggested above. It was presumed that bank managements would accept such a procedure as long as the transactions in question involved the two parties directly and the bank is not being used as an intermediary to a situation in which it was not originally engaged. Bank management might well be reluctant to consider such a procedure when being approached by a broker to serve as an intermediary to a situation in which it is not an original counterparty. In any case, bank management should have an established policy as to how to proceed in those instances.

[1] **This provision is the only one in this list of general elements of good market practice to which some brokers could not agree. They do not feel they should be compelled to close out, immediately upon discovery, positions forced on them.**

(A) Difference Checks

Under this procedure, any difference in a transaction would be paid by way of a check payable to the institution, not an individual, to which the difference is owed. Payment could be made either periodically within the time frame suggested above or for each transaction, according to some predetermined schedule mutually agreeable to the two parties Management should review regularly the individual and aggregate payments from and to each broker and involving each trader to identify patterns of unusual activity.

(B) Adjustment of Brokerage Bills

Under this procedure, brokerage firms would add a line at the end of the brokerage bill and after taking account of any discounts, titled "adjustment for differences." If credits exceed the amount of a current month's bill, the remaining balance should be repaid in full by check and/or credited to the brokerage bill at the end of the following month.

(C) Compensation Accounts

The value of any difference or of any "points owed" should be set in dollars at the time the transaction is discussed between the managements of the banking institution and the brokerage firm. The amount is then entered into an accounts payable or accounts receivable in the name of the appropriate institution. Settlement of the account would take place on a regular basis, not normally extending beyond the end of the next calendar month.

This procedure, when first discussed by the Task Force, was conceived of as a "controlled system of points." The Task Force started out by looking for procedures that might allow financial differences arising from bank-broker transactions to be expressed in points, and thereby echo some of the market practices that are now followed. But in the end, if a controlled system of points contains all the prerequisites for recording transactions and settling claims on a timely basis, the system becomes a compensation system with cash-flow consequences virtually equivalent to the previous two systems.

(D) The Points Bank Alternative

Another compensation mechanism that the Task Force discussed to provide for the recording of points was based on the idea that a bank, at its discretion, might act as a "points bank."

Under this procedure, a brokerage firm might arrange with a bank, hereafter referred to as the "points bank," a facility based either on a deposit or a line of credit to finance settlement of differences which otherwise would result in the borrowing of points from a customer. Such a facility would enable the broker immediately to settle differences and close any position that arises from a difference situation. A broker employing such arrangements would offer the name of the points bank whenever it did not otherwise have a counterparty to the trade. The broker would draw down on his deposit or on the line of credit whenever differences involved losses to the firm, and would pay off drawings or restore its deposit when differences operated to the advantage of the firm.

Activity under the facility could be seen as providing a record of the broker's difference transactions documented on the books of the points bank. The points bank would need to establish appropriate controls and reporting to monitor activity and outstandings under the facility. Presumably, the bank would charge appropriate fees for the services rendered so that the broker would be paying commercial rates on its financing activities.

There are several considerations a bank would want to take into account before establishing itself as a points bank. The points bank would need to consider carefully its willingness to take on an exposure to a broker for amounts that could be so large during the day as to exhaust at times the size of the facility or be incurred so quickly as to be difficult to monitor The bank would have to be confident that its name was acceptable in the market for a significant amount of business, since the introduction of a name by the broker with low acceptability will require many name substitution transactions and further undermine the reputation of the bank in the market place. The use of the bank's name by the broker would also mean that other institutions' credit lines with it would be used by the broker, cutting down on the amount of exposure these institutions would have left to support the points bank's own foreign exchange trading operations. Banks that in the past have been involved in such arrangements may have believed that the arrangement served to introduce its name in the market place. Experience shows, however, that name exposure alone does not foster a sound reputation.

The existence of such a mechanism, even if banks were willing to provide this type of financing to brokers, would have the effect of keeping a points system in place in the New York market and keep open the possibility that brokers' neutrality might be compromised by their efforts to repay

points. The only way banks that want to discourage the use of points could effectively do so under this mechanism would be for them to refuse to act as an intermediary in situations in which they are not originally engaged. Such a refusal would prevent brokers from using points they have earned from third parties to work off points obligations with the institutions adopting such a policy. Only if all banks were to adopt such a practice would the existence of points banking not impair the broker's neutrality in performing brokerage functions.

The majority of the Task Force therefore concluded that this option could not be listed among the preferred mechanisms for dealing with difference situations. It would not be appropriate to encourage banks to serve as points banks. Nor would the objective of reducing the points practice and maintaining the neutrality of the brokers be best achieved with this system Although it may be that any compensation system is vulnerable to abuse, the need for management review of each difference situation envisaged for the other mechanisms provides for better protection and more thorough scrutiny of all difference situations than can be obtained through this alternative.

Role of Bank Examiners

It would be expected that bank examiners would review the mechanisms banks have in place for dealing with difference situations. They would want to assure themselves that the systems in place keep management properly informed about all the differences that arise as well as to evaluate the adequacy of bank policies and procedures for dealing with these situations. During an examination, the examiners may also choose to request details from brokers of outstanding compensation items due to or from banks to reconcile these amounts against bank accounting records.

THE USE OF POINTS IN THE BROKERED FOREIGN EXCHANGE MARKET March 23, 1989

On May 3, 1988 the Foreign Exchange Committee distributed a letter expressing concern about the use of points by banks and brokers in deferring the financial effects of disputed trades in the foreign exchange market

The Committee's letter was based on concerns that this practice may undermine institutions' financial records, distort the neutrality of brokers, and invite unethical, if not illegal, abuses by the parties involved Although points usage expanded apace with the volume of foreign exchange transactions, in few instances was the practice of points sanctioned by management. Nor was management made aware of financial obligations undertaken in the name of its institution through points transactions. The letter went on to recommend that participants in the brokered foreign exchange market either prohibit the use of points by their employees or establish procedures that would address the concerns expressed by the Committee.

In conjunction with the May 3 letter, the Committee established a Task Force, consisting of representatives of bank management, bank dealers and brokers, to review market practices involving points. The objectives of this review were to identify the situations that give rise to points and to develop acceptable conventions for resolving disputed trades and providing compensation where appropriate.

After considering the findings of the Task Force, the Foreign Exchange Committee has concluded that market conventions need to be changed so as to eliminate the need for a points system of any kind. Furthermore, situations that involve payment of compensation between banks and brokers should be addressed in ways that provide for full documentation, management review, and cash settlement.

Suggested Changes in Market Convention Concerning Rate Quotation

The Committee believes that the market convention concerning the quoting of exchange rates by brokers should NOT require brokers to substantiate prices until changed or canceled, as described below.

The Committee believes this suggestion represents the best hope of relieving the foreign exchange market of the taint of suspicion and unethical practices that may surround the use of points At the same time, the Committee recognizes that its suggestion represents a significant change in market practice, not only here but elsewhere, and so has requested the Federal Reserve Bank of New York to discuss with other central banks the possibility of extending this change to other major financial centers.

The Task Force found that points are most frequently used to avoid missed prices. A broker proposes a transaction at a given price but a bank dealer misses the price because, before this transaction can be confirmed by the broker, the deal is completed with another institution or the original counterparty has canceled his interest. If a bank dealer insists on doing the transaction at the original price—or if the broker offers to find another counterparty at the same price—but in the meantime the exchange rate has moved adversely, the broker may arrange for the deal to be closed by borrowing points from a bank. The difference between the price first quoted and the then-current market price is the number of points If it is the bank dealer that insists that the broker perform at the originally quoted price, the dealer is said, in market parlance, to "stuff" the broker. Stuffs occur only because it has been a generally accepted market practice to assume that prices shown by brokers are "firm" That is, the broker has been presumed to be able to execute a transaction with an acceptable counterparty at the stated price until the price is changed or canceled.

The convention of "firm prices" was originally adopted when the exchange market was much smaller and banks were concerned that brokers might fabricate price quotes to attract business. The foreign exchange market has now grown to a size such that these concerns are not sufficiently important, under most normal circumstances, to justify the problems associated with the points practice. Moreover, in an age of international brokerage links and broadcasting of prices to an ever expanding audience of traders, the presumption that prices remain firm until changed or canceled is no longer realistic.

In the view of the Committee, brokers' customers should still expect that, at the instant a broker quotes a price, he has an acceptable counterparty prepared to deal a marketable amount at the quoted price. However, by the time a bank dealer can respond, the transaction may have already been executed by another bank that responded faster, the original counterparty may have withdrawn the price, or a new price may have been proposed by a different institution. Banking institutions have reason to believe that brokers have strong incentives to live up to these expectations. Those brokers that do not have counterparties or otherwise let their customers down more than most will be seen, other things being equal, as offering an unreliable and uncompetitive service to their customers.

Accordingly, the Committee urges bank management to establish clear policies against their dealers' stuffing brokers and to encourage the understanding that brokers are not required to substantiate prices.

The Committee recognizes that a number of institutions have formally adopted a "no stuff" policy, but individual dealers do not always abide by such a policy. Moreover, a dealer may intimidate a broker, without formally stuffing, by threatening to suspend the broker's service. For this and many other reasons, bank management should play an active role in overseeing bank-broker relationships.

At a minimum, a senior member of the management team should be designated to identify the brokers the institution will use, establish the terms under which brokerage service is to be rendered, provide oversight to ensure that its policies relating to bank-broker relationships are being adhered to, and be available to intercede in any disputes that may occur.

At the same time, the Committee urges broker management to enforce a practice of refusing stuffs from bank dealers and to bring problems they may have with individual relationships to the attention of the appropriate level of management at the institution involved.

As an integral part of these arrangements, the Committee expects brokerage firms to have in place clear policies prohibiting position-taking by brokers and requiring that any position that a broker might be forced into as a result of a problem with a particular transaction be closed out at the earliest practical time after the problem has been identified

Other Suggestions for Eliminating the Need for Points

The Task Force found that the largest points transactions were caused by errors and misunderstandings that were not quickly recognized and resolved. It concluded that banking institutions and brokers should do more to avoid mistakes and misunderstandings in a market that depends on verbal communication in frequently fast-moving and hectic market conditions

Managements of both banking institutions and brokerage firms should review their own procedures and make clear to their staff, if necessary at regular intervals, the importance for the reputation of their institution and the operation of the market of acting reasonably and professionally in all circumstances

Management should play a key role in reminding its staff of, and training new staff in, the need to use clear, common terminology, to be aware of standard market practice and to follow the procedures of their institution.

Management should consider instituting more frequent intra-day checks of deals with the other counterparties, including those arranged through brokers. The current norm of checking once daily may be inadequate

Suggestions Relating to the Resolution of Differences and Disputed Trades

When differences do occur, the following procedures should be observed in documenting and settling the consequent financial effects:

1. Immediately upon realizing that a problem exists, both the trader and the broker have the responsibility of closing out any residual market risk and of identifying the dollar amount of any difference or dispute This is a specific application of a more general proposition regarding position-taking activities of brokers and dealers· Any time a broker is forced into a position, the broker should close out that position at the earliest practical time: any time a mistake occurs that puts a dealer in an unintended position, the dealer should either close out that position at the time the situation is discovered or take full responsibility for any loss that may subsequently occur.

2. At the banking institution and at the brokerage firm, management personnel not involved in the original transaction producing the difference should identify how the difference arose and confirm the dollar amount involved in order to allocate responsibility for the difference. This procedure transforms the dispute from an individual trader-broker issue to an inter-institutional issue

3. A written version of how the difference arose should be produced for the records of each firm.

4. The banking institution and the brokerage firm should exchange written confirmations of the dollar amount of the difference and a date by which the difference will be settled. These confirmations should be sent to the areas that normally handle confirmations, with a copy to the principals involved. These confirmations should be the basis for creating accounts payable or receivable balances in the name of the banking institution or the brokerage firm involved.

5. Management should determine the level of exposure it is willing to accept *vis-a-vis* any firm and be able readily to identify the level of outstandings at any time.

6. Settlement of differences should take place on a regular basis not normally extending beyond the end of the following month.

7. Either the banking institution or the brokerage firm may request expedited payment of outstanding claims at any time.

8. At the time the amount of compensation is set, the amount of money involved in the settlement should be entered to an accounts payable or accounts receivable balance in the name of the brokerage firm or the banking institution, with an offsetting entry either to a foreign exchange profit and loss account or to an errors account.

9. Most differences arise in connection with spot transactions. Should a difference develop from transactions involving forward or term swap transactions, compensation should coincide with the term of the underlying transaction.

The actual settlement of any bank-broker differences that do rise can be settled by one of two methods:

A. *Difference Checks*

Under this procedure, any difference in a transaction would be paid by way of check payable to the institution, not an individual, to which the difference is owed. Payment could be made either periodically within the time frame suggested above or for each transaction, according to some predetermined schedule mutually agreeable to the two parties. Management should review regularly the individual and aggregate payments from and to each broker to identify patterns or unusual activity.

B. *Adjustment of Brokerage Bills*

Under this procedure, brokerage firms would add a line at the end of the brokerage bill and after taking account of any discounts, titled "adjustment for differences." If credits exceed the amount of a current month's bill, the remaining balance should be repaid in full by check and/or credited to the brokerage bill at the end of the following month.

It is the Committee's view that the settlement of differences between banks and brokers should be even-handed, providing for payment to as well as from brokers. Banks should assume that errors that turn out to be in the broker's favor are also to be settled in the manner described above; in other words, these procedures should provide for compensation being paid by banks to brokers as well as the reverse.

An institution should have an explicit statement of policy on how its institution should proceed to reduce and deal with differences or disputes. Such a statement should state explicitly whether and under what circumstances its personnel can become involved in points transactions, recognizing that any traders or brokers who allow unrecorded points transactions to be executed expose themselves to potentially significant financial, legal and regulatory risks. It is the understanding of the Committee that procedures and records regarding policies for settling differences, files concerning individual differences, and records regarding unsettled differences can and will be reviewed by bank examiners.

OTHER SELECTED DOCUMENTS

GUIDELINES FOR THE MANAGEMENT OF FOREIGN EXCHANGE TRADING ACTIVITIES

DOCUMENT OF ORGANIZATION

GUIDELINES FOR THE MANAGEMENT OF FOREIGN EXCHANGE TRADING ACTIVITIES

The U.S. foreign exchange market has changed significantly in recent years More sophisticated communications systems have provided access to greater numbers of institutions throughout the world, prompted wider use of off-site and around-the-clock trading, and contributed to sharp growth in turnover. New financial instruments have introduced complexities to dealing that did not previously exist.

With changes in the market have come changes in the institutions operating there. A number of new participants have joined the market, bringing with them different practices and perspectives. Existing firms have been forced to adapt or modify traditional procedures. Foreign exchange units, once operated almost strictly as a service for customers, can today be major profit centers for banking institutions. Accordingly, management objectives have changed to place more attention and emphasis on profitability.

Growth and change are also affecting the individuals acting within the market. An influx of new people, not necessarily familiar with the specific traditions of the foreign exchange market, has altered the tone of the marketplace. More aggressive trading for profit and the growing importance of incentive-based compensation programs have increased pressure on individuals, pressure compounded by the fast pace and increasing size of the trades themselves. Partly in response to these developments, the turnover of personnel has risen, and individual traders have become increasingly specialized.

In acknowledgement of these trends, the Foreign Exchange Committee updated and expanded its 1980 Management Guidelines for Foreign Exchange. The Committee is especially concerned that managements recognize how change has affected and will continue to affect their own operations.

Most important, management should realize the growing responsibility that is now delegated to the individual trader. He not only can commit substantial resources of the institution but is relatively independent in doing so. More dispersed operations, the greater number and size of transactions, and greater specialization among individuals have all contributed to an environment in which there is less support for the trader in the form of oversight or timely suggestions from other experienced personnel. Implicitly, institutions place tremendous faith on each individual's ability and willingness to operate in accordance with institutional policies and regulations.

The Committee advises management to weigh these considerations seriously when making hiring or assignment decisions. The Committee firmly believes that by attracting and retaining quality personnel, institutions will protect their own standards of performance. They will also contribute to the maintenance of a professionally sound and smoothly functioning foreign exchange market, a goal that all market participants share.

Some specific issues relating to the management of foreign exchange activities the Committee finds to be particularly topical are discussed more fully below. In revising its guidelines, the Committee focused its attention especially on the requirements of a foreign exchange trading operation. Many of the points discussed are, however, general enough to apply to trading operations for other closely-related instruments.

Confidentiality

Confidentiality and anonymity are essential to the operation of a professional foreign exchange market. Participants in the market—commercial accounts and banks alike—can expect to have their interest and activity known only by the other party to the transaction and an intermediary if one is used.

Management is responsible for ensuring that its employees can readily identify information that is confidential or situations where anonymity is essential. Management should also instruct its employees to handle such information accordingly. In the normal course of his duties, a trader has access to a considerable amount of confidential information. In addition to the details of the trades he executes, he may know of confidential material prepared within his own organization or obtained from those with whom his institution does business. Such information might pertain directly to the foreign exchange market or to other markets. While not explicitly stated to be confidential, it may not be publicly available.

Whenever confidentiality is broken, it is the role of management to see to it that the institution moves swiftly to correct the conditions that permitted such an event to occur.

Managers should not tolerate a trader utilizing confidential material for personal benefit or in a manner that compromises the institution in any fashion. A trader should not be permitted to pass on information outside his institution. Nor should a trader distribute information within his institution, except on a need-to-know basis.

Management should also be alert to the possiblity that the mechanics of foreign exchange trading might jeopardize the institution's attempt to preserve confidentiality. When the Foreign Exchange Committee issued its original guidelines in 1980, a procedure that generated considerable concern and subsequent discussion about confidentiality was the use of two-way speakerphones by both brokers and dealers. Since then two-way speakerphones have either been abandoned or, where still in use, have been controlled so as to maintain the level of confidentiality appropriate to executing transactions.

As technological innovations are introduced into the trading environment, management should be aware of the security implications of any changes. In today's market, the widespread use of computers represents a case in point Much of the information stored there is highly sensitive. It should be protected. Access should be strictly controlled and monitored. All necessary steps should be taken to protect confidential materials from potential breaches, inadvertent or otherwise.

Visitors to the dealing or brokerage operation may present yet another complication in the attempt to ensure confidentiality. There is always the possibility that visitors will overhear information not intended for them; names of participants, amounts of trades, and currencies traded may be disclosed. Whether or not that information is ever put to use, and however unintentional the distribution of that information, the simple fact that the presumed confidentiality between counterparties has been violated is grounds for concern.

Accordingly, management might consider whether visits to individual operations are appropriate. If so, management should move to protect sensitive information. When allowed, visits should be prearranged. Similarly, visitors should be accompanied by an employee of the host institution. It is strongly recommended that a visitor not be permitted to trade for his own institution from the premises of the host.

Trading for Personal Account

In general, managers expect that any trader will give full attention to the employing institution's business activities, not distracted by his own personal financial affairs Management also expects that any trader will fulfill his institutional responsibilities objectively, unbiased by his own financial position.

Management should be aware that, if traders are permitted to deal for themselves in instruments closely related to the ones they deal for the institution, a conflict of interest or an appearance of a conflict of interest might arise that could be detrimental or embarrassing for the institution, the trader, or both. Therefore, it is management's responsibility to develop and to disseminate a clear institutional policy on these matters. In that regard, most institutions require the explicit permission of senior management whenever a trader engages in a transaction for his own account, either in the instrument he deals for the institution or one closely related to it.

Traders should recognize that they, too, have a responsibility for identifying and avoiding conflicts or appearances of conflict of interest. In particular, a trader should bring to management's attention any situation about which there is a question of propriety In no instance should a trader use the resources of his professional affiliation to facilitate or to create trading opportunities for personal gain.

Entertainment/Gifts

Because of the nature of the money and exchange markets and the manner in which business is conducted in these markets, close personal ties may develop between professionals. Close contacts among market participants can be constructive to the extent they contribute to the smooth functioning of the market. There is a risk, however, that these ties may tempt a trader to assist a fellow practitioner at the expense of the employer.

Traders, unlike many others within an organization, are in a position directly to reciprocate gifts, entertainment and favors by the way they direct the business they execute for their institution. Management should therefore assure itself that general guidelines its institution may have concerning entertainment and the exchange of gifts are sufficient to address the particular circumstances traders may encounter. Where appropriate, the general guidelines should be supplemented for trading personnel to help dealers avoid the dangers of excessive entertainment. Special attention needs to be given to the style, frequency, and cost of entertainment afforded traders. A mechanism for monitoring entertainment should be in place. Although it is customary for a broker or trader to entertain market contacts at lunch or

dinner on occasion, entertainment even in that form becomes questionable when it is underwritten but not attended by the host.

In turn, traders should conduct themselves in such a way as to avoid potentially embarrassing situations and to reduce the chances of incurring a presumption of indebtedness. They should fully understand their institution's concept of what constitutes an appropriate gift or entertainment as well as the bounds of law and reasonable propriety. They should also be expected to notify management regarding unusual favors granted them by virtue of their professional position.

Personnel Issues for Management

In recent years the work environment for trading personnel has changed in some very important respects:

- The stress and pace of work for traders has become increasingly intense. They are operating under strong internal pressures to make profits in a market that is open 24 hours a day.

- The process of developing a trader has become far more compressed. Seldom do individuals learn trading over a period of years, by starting with purely clerical tasks and gradually—under the tutelage of a seasoned and experienced foreign exchange professional—taking on more responsible tasks. Today, traders are either hired from other institutions or, they are developed internally from individuals thought to have either on-the-job experience or academic training in areas that would prepare them quickly for market-making and/or position-taking activities.

These changes raise new issues for management to consider and require new responses, some of which are specifically mentioned here.

Stress. Stress may lead to job-performance problems. Managers need to be able to identify symptoms of stress among their trading personnel. An institution should have the ability to respond to any incipient problem, even if doing so means that foreign exchange managers may have to be more flexible in their approach to personnel issues than is generally the case for the organization as a whole.

Drug Abuse. Drugs, as well as other mind-altering substances, can be debilitating and affect the user's judgment. They can also produce a need or dependency that may influence a user's professional conduct in other ways. The apparent ease of distribution and the changing nature of the substances used make it difficult for management to recognize incidents where drugs may be involved.

Management should educate themselves and their traders to signs of use and to the potential damage incurred by drugs and other abused substances. Management would thereby be in a better position to detect possible use in the organization.

Policies and Procedures of the Organization. Increased mobility of dealing personnel within the financial industry has a material effect on the dealer's perception of his relationship to his employer. It is more possible today than before to have a dealer trading an instrument for an institution without having either an intimate knowledge of the traditions and practices of that market or the traditions and corporate culture of his current employer. This situation can give rise to misunderstandings about what management expects of its traders.

Management should ensure that each trader is fully acquainted with the policies, procedures and style that the institution chooses to employ in the conduct of its business. This task is made more difficult by the high level of turnover that now exists among trading personnel. Management should consider providing complete orientation procedures for new employees of all levels and formal procedures to ensure periodic review of the institutions's rules and policies by each trader.

Trading Practices

Traders' Responsibility for Prices, Credit Guidelines. In the conduct of dealing, traders quote prices directly to customers or, in the interbank market, to other dealing institutions either directly or through the intermediary of brokers. Traders are expected to distinguish which counterparties represent acceptable names for doing business and to operate with those counterparties in accordance with management's policies and procedures. In making a price, the trader is expected to deal with an acceptable name at the price he quoted within a reasonable period of time; his counterparty is expected to respond within a reasonable period.

Need to Avoid Questionable Practices. At times when markets are unsettled and prices are volatile, opportunities may arise for traders to engage in practices which may realize an immediate gain or avoid a loss, but which may be questionable in terms of a trader's reputation—as well as that of the bank—over the long run. The kinds of questionable

practices are many Some, like the perpetrating of rumors, may reflect adversely on the professionalism of the dealer Others, like the reneging on deals, may give rise to liability.

Management should be alert to any pattern of complaints about a trader's behavior from sources outside the institution such as from customers, other banks, or intermediaries. Information available within the organization should be reviewed to determine if individual traders become frequently involved in disputes over trades or tend to accept deals at rates which were obvious misquotes, accidental or otherwise, by counterparts. Complaints about trading practices may be self-serving, however, and should be handled judiciously.

Off-Market Rates Counterparties from time to time may ask a dealer to use an "off-market" exchange rate. Such a request arises most frequently in connection with swap transactions when there can be a discussion about whether the "current" or "historical" rate is to be applied. To be sure, the essence of a swap transaction is neither the spot nor the forward rate *per se*, but the relationship between the two.

Even so, any use of "off-market" rates should raise questions of propriety and perhaps policy issues for the bank. Use of non-market rates may in effect move income from one institution to another (perhaps over an income reporting date) or alter the timing of reported taxable income. Since use of historical rather than market rates can in any case result in an extension of unsecured credit to the counterparty, all such requests should be referred to management for policy and credit judgments as well as for guidance on appropriate accounting procedures. While the nature of certain commercial transactions may justify the use of historical rates with selected customers, use of "off-market" rates with other banks should be considered highly exceptional.

Trader-Trader Relationship

For several years, banks have been dealing directly with each other, at least at certain agreed-upon times during the dealing day. The nature of the direct dealing relationship will vary according to the interests of the two parties. Management should be sure that the terms of each relationship are clearly understood and acceptable to both institutions, and are being respected in fact by the way their traders conduct themselves.

A possible element of a direct dealing relationship between two banking institutions is reciprocity. That is, each bank of the direct dealing pair may agree to reciprocate upon request in providing timely, competitive rate quotations for marketable amounts when it has received such a service from the other Differences in the relative size of the institutions, together with their expertise or specialization in certain currencies, will influence what is perceived by the two parties as an equitable reciprocity. If there are to be limitations to reciprocity, or times of the day when the two do not wish to be bound by the obligation of reciprocity, the limitation should be explicitly agreed upon in advance by the two parties.

Management should analyze trading activity periodically. Any unusually large concentration of direct trading with another bank or banks should be reviewed to assure that the level of activity is appropriate

Trader-Broker Relationship

The use of brokers is a longstanding feature of the foreign exchange market in the United States By providing participants anonymity until a transaction's size and exchange rate is agreed to, brokers contribute to the depth and breadth of the market A brokers' market can function smoothly, however, only if most participants in that market can be reasonably confident that virtually all counterparties contacted through brokers will meet certain minimum standards of creditworthiness and professionalism

A basic contribution that each institution using brokers can make in this regard is to assure itself that its name is acceptable to enough of the participants in the brokers' market that its actions do not contribute to "name" problems. From time to time, entities using the brokers' market are not broadly regarded as acceptable counterparties If a broker proposes a transaction on behalf of such an entity, it is appropriate for that broker to make potential counterparties aware that the transaction may need to be referred to management for credit approval—that is, that the transaction may be "referable"—before the transaction can be agreed to. Brokers cannot be expected to make credit judgments for banks. But they are in a position to know what entities, if any, are consistently difficult to place and have a responsiblity for indicating to potential counterparties if a price they are currently showing is on behalf of such an entity. Those institutions whose names are not sufficiently acceptable might consider whether it is appropriate or even in their long-run interest to continue to use brokers.

Brokers with links to affiliated firms overseas can also contribute by making greater efforts to ascertain whether a bid or offer price, that is communicated to it by an overseas affiliate for dissemination here, has been initiated by an

institution that might be an unacceptable or unrecognized counterparty to many of the broker's U.S. clients. In this instance, the broker should indicate that the institution may either be referable or unknown, even if the overseas brokers do not do so. Further, brokers should apprise any client regarding the name recognition and credit line problems that it might face in executing transactions through a broker.

For those institutions that use brokers' services, foreign exchange managers should themselves maintain contact with their counterparties at each individual brokerage firm to establish and monitor the brokering relationship. Brokers and their customers should be satisfied that all of the terms and conditions of the brokerage service being rendered are mutually agreeable, that the nature and extent of entertainment are appropriate, that the broker treats his clients' business with discretion, and that any aspect of the relationship can be reviewed by either party at any time. Management will find that brokers welcome frank and constructive conversations on such matters.

In addition, bank management needs to establish and clearly communicate internal policies and procedures covering the way its dealers should do business with brokers, as well as the way any disputes between the two are to be resolved. In so doing, management needs to be aware of areas of tension that arise between bank dealers and brokers.

One recurring source of difficulty occurs when a dealer discovers that a transaction he thought he had agreed to is not consummated by the broker at the agreed price. Such a situation may occur because the price was simultaneously canceled, because the amount being presented at that price was insufficient to cover the amount of the dealer's transaction, or because the broker received multiple and simultaneous responses to the original bid or offer

Whenever a trade is aborted, it may be impossible for the broker to find another counterparty at the original price. Most dealers in this situation are prepared to cancel their price if a broker cannot conclude the transaction within a reasonable time or do at least a part of the original transaction at the agreed price. But, if the trader insists that the original transaction be fully honored, the broker is forced to assume market risk.

When forced to assume market risk, the broker may respond in two ways, each entailing undesirable consequences. He may deal at the next available price, passing on to the trader any profit that would result from a favorable movement in exchange rates and protecting the trader from any potential loss by remitting a difference check if there were an adverse movement in market rates. (Sometimes when the loss accruing to the broker is substantial and he requests time to try to reduce his loss, the transaction may be left open and the difference check deferred for several hours.) Alternatively, the broker may request a trader from another institution to deal at an off-market rate. Should this second trader agree, the broker would "owe points" to the second trader, which he would have to repay one way or another.

The Committee has expressed grave concern about any practice that, in effect, forces the broker in a role as principal to a foreign exchange transaction, of managing a foreign exchange position, or otherwise compromising the neutrality of the broker. (See Foreign Exchange Committee's paper "Name Substitution Practices in the United States Foreign Exchange Market" in this Committee's Annual Report of 1982.) Foreign exchange brokering firms are often not capitalized to an extent appropriate to accept the risk of being put into those situations routinely. Moreover, the obligations which brokers are presumed to assume under some of these arrangements may not have a clear legal basis. Bank management should be aware of these practices, determine if and under what circumstances dealers of their institutions should engage in them, insist upon a speedy resolution of any dispute, and ensure there are adequate controls to detect a lack of compliance with bank policy.

To the extent that such practices do continue in the foreign exchange market in the United States, for reasons of operational convenience and market efficiency, their frequency should be reduced to those situations that do not readily allow for alternative methods of resolution. Although difficulties are bound to occur on occasion, there is likely to be a relationship between the frequency of these problems and questions regarding the reputations of the individuals or concerns involved.

The practice of "owing points" developed in order to permit brokers a way of resolving difficult situations. Some banks prefer to receive a difference check than to permit their dealers to trade in brokers' points. Whatever an institution's policy may otherwise be, under no circumstance should a trader request or a broker agree to "lend points" to a trader or otherwise facilitate a trader's effort to deal at an off-market price in order to hide a trading loss or inflate his profit. Management of brokerage firms should discourage this type of behavior.

A trade may also be aborted because of a "name" problem. That is, one party may indicate that it cannot accept the name of the other for credit line reasons, either because it has no line for the second institution or its line is full. The broker should explain to the second institution why the transaction has not been consummated and identify the other institution involved. Two considerations support this conclusion. First, most managers consider this information to be helpful since it clarifies the market standing of their institution. Second, market participants recognize that credit lines are a necessary prudential constraint on market participants; their invocation in appropriate circumstances does not necessarily reflect poorly on either institution.

When a "name" problem arises, each institution knows the details of the trade that, but for the problem, would have been consummated. Because such information is considered privileged in this market, many institutions believe that, once they have shown their hand in this way, they should complete a trade with the same specifications. Brokers may respond to this desire by trying to find a new counterparty (a clearing bank) to interpose between the two original ones. As long as the clearing bank is in full knowledge of the trade and is operating in accordance with its normal procedures and limits, it has no different risk serving as a clearing bank than it has with any other trade with that bank. But the clearing bank has tied up a portion of its credit lines with the other two parties. Moreover, the two transactions entail normal processing costs but do not generate revenues, since both sides of the trade are executed at the exchange rate agreed by the original two counterparties.

Given the risks involved and the disruptions that can occur when transactions cannot be completed expeditiously, foreign exchange managers should clearly define with their brokers the approach their institution will generally follow in handling specific name problems. Some provide their brokers with the names of institutions with which they are willing to deal or, alternatively, the names of institutions they will virtually always reject. With the help of this information brokers can reduce the frequency of name problems by not matching pre-specified pairs of institutions.

Managers of foreign exchange trading operations should also assess the extent to which and the ways in which their institutions are used as clearing banks. Some banks decline to accept the name of a clearing bank and others decline to act as a clearer in such transactions.

Regardless of whether a transaction is left incomplete because of credit line or other reasons, a banking institution is left with two options in the first instance: it can either cancel its bid or offer price with the broker or request that the broker find a clearing or substitute bank. If it opts for the latter, it should allow the broker a reasonable period of time in which to find a new counterparty whose name is acceptable. In any case, a substitute should be found in no more than a few minutes and preferably within the same phone call. If an acceptable name cannot be provided in a reasonable time period, the institution should consider canceling its price.

Relationships between brokers and traders are based on a variety of factors, including quality of service (speed, reliability, closeness of prices, size of deals) and the effectiveness of personal interaction. In these circumstances traders are quite likely to favor a few brokers over others and a certain amount of concentration of business is not inappropriate. However, inasmuch as it is possible for a trader to influence a broker's share of the bank's business, there is always the possibility that some brokers may attempt to ingratiate themselves with a trader or that a trader may use his volume of business as leverage to make unreasonable demands upon a broker. Therefore, managers should be alert to subtle changes in patterns of brokers used and to possible undue concentration of business, especially if they perceive no significant difference in the quality of service from other brokers.

In the interest of preserving confidentiality of transactions, visits by traders to brokers' offices during the trading day should normally be prearranged. During such visits traders should never participate in the interbank market through utilizing the on-premises communications network.

Brokers should take full responsibility for confirming all international transactions to the institutions they service by telex, or by any other means of written confirmation acceptable to the banking community. In addition, brokers have responsibility for passing instructions on all spot international transactions the same day the trade is consummated. Banks, of course, have the responsibility to check the confirmation brokers provide on a timely basis.

Trader-Customer Relationship

Growing strain has emerged in the relationship between bank dealers and their customers. The strain reflects increased size and sophistication of customers' requirements, the pressures of a more competitive marketplace, and increased volatility of exchange rates. Customers are increasingly requesting narrow spreads to cover an ever growing size of transactions. At the same time customers do not typically extend reciprocity; that is, they do not make markets to bank dealers nor do they provide rate quotations with

narrow spreads to cover bank dealers' own needs. This situation can be frustrating for dealers who must cope with internal pressure to make profits. These circumstances require a high degree of integrity and respect in relationships between dealers and customers. These circumstances also require clear communication between management on the one hand and traders and sales personnel on the other hand about the business objectives of the trading operation.

It is normal practice for non-financial organizations to delegate trading authority formally to specific persons within the organization and to advise their bankers accordingly. Although one cannot identify with certainty the authorized individual via telephone, banks are obliged to make reasonable efforts to comply with corporate dealing authorization instructions. Bank personnel who deal with customers should be familiar with current corporate instructions and those instructions should be readily accessible. Additionally, sales and trading personnel should bring to management attention changes in counterparties' trading patterns or the accumulation of significant book profits or losses.

Operational Aspects of Trading

Trading of foreign exchange and other money market instruments exposes an institution to various forms of market risk and various forms of credit risk. Management of a trading institution should clearly identify the types and scale of risk it is willing to have the trading operation assume, as well as have in place effective procedures for monitoring its individual risk exposures and for detecting lack of compliance with management's policy directives. Both the ways of expressing risk exposures and the procedures for monitoring them differ considerably from one institution to another. The differences depend among other things on the structure of the organization, volume of activity, flexibility desired, costs associated with individual controls and differences in law and practice between trading markets. But it is essential that each institution's system of control be commensurate with the risks to which it is exposed.

Even with such systems in place, trading errors will occur. Errors in foreign exchange are becoming increasingly costly and burdensome to resolve. This trend reflects the growing size of individual deals and daily volume as well as exchange rate volatility and the high level of turnover of personnel. At the same time, the potential for errors has increased as different institutions adapt to changing technology and are at different stages of implementing these changes. Management should be attentive to the need to maintain clear lines of communication and authority internally, have adequate support for its dealing operations, and have in place procedures to facilitate timely recognition and resolution of problems that do arise.

Deal Confirmations. Increasingly, institutions active in the exchange markets are choosing to exchange confirmations of all deals of significant amounts—spot and forward, interbank and corporate—by telephone, telex, SWIFT, or other means of immediate communication on the transaction date. Same-day telephone confirmation is then followed up with written confirmation. Trading institutions have found that the sooner a problem is identified, the easier and maybe less expensive it is to resolve. Prompt and efficient confirmation procedures also are a deterrent to unauthorized dealing.

Taping of Telephone Conversations. Another practice many active trading institutions have adopted is to tape record all telephone lines used for trading and confirmation. The taping of conversations in foreign exchange trading rooms and confirmation areas helps resolve disputes quickly and fairly. Whether or not dealers need access to untaped lines in order to carry out unrecorded conversations on sensitive topics is a matter of individual preference.

Access to tapes containing conversations should be strictly limited to those personnel with supervisory responsibility for trading, customer dealing, or confirmations. They should be kept in secure storage for as long as is sufficient for most disputes to surface. Wherever taping equipment is first installed, banks should give counterparties due notice that, henceforth, conversations will be taped.

Third Party Payments. Management should have a clear policy for dealers concerning the appropriateness of honoring requests for "third party payments." A "third party payment" involves a transfer of funds to an account, institution or corporation other than the counterparty to the deal. A subsidiary of the counterparty is a legally separate third party but a foreign branch of an institution is not.

The normal payment risk inherent in foreign exchange — the risk that funds are paid out to a counterparty but not received — is most acute in deals where the funds, either local or foreign currency, are transferred to a party other than the principal to the transaction. These "third party payments" are more susceptible than normal transactions to fraud perpetrated by a current or former employee of the counterparty who is diverting payment to a personal account, fraud perpetrated by an employee of the bank who is altering the payment instructions, or misinterpretation of the payment instructions whereby the funds are transferred to an erroneous beneficiary. In many cases the bank's ability to recover the funds paid out will depend upon the outcome of legal proceedings.

As a matter of policy, many institutions establish special controls for this type of transaction. The control procedures

appropriate to address the associated risks would include various measures to authenticate or verify "third party payments" such as:

- to require the counterparty to provide standing payment and settlement instructions;
- to require an authenticated confirmation on the transaction date;
- to require the counterparty to submit a listing of individuals authorized to transact business and to confirm deals; or
- to confirm by telephone all deals on the transaction date to the individual identified by the counterparty.

Importance of Support Staff. Management's attention to a foreign exchange trading operation is usually directed toward establishing trading policies, managing risk and developing trading personnel. Equally important is an efficient "back office" or operating staff. Details of each trading transaction must be accurately recorded, payment instructions correctly exchanged and executed, timely information provided to management and traders, the underlying results properly evaluated and accounts quickly reconciled. Time-consuming and costly reconciliation of disputed or improperly executed transactions mar the efficiency of the market, hurt profitability and can impair the willingness of others to trade with the offending institution.

Accordingly, management must be aware of its responsibility to establish a support staff consistent with the scope of its trading desk's activity in the market. Conversely, management should ensure that trading is commensurate with available back office support.

Computer and Technical Support. In recent years, the development of new, complex products and services has led banks to introduce products whose characteristics and risks are significantly different from those traditionally offered. As new activities are being considered, management should recognize the need not only for the special requirements new products or services may require but also for accounting, legal control and additional back office support. Management should also consider the desirability of enhancing dealer support by providing computer assistance to allow accurate and timely pricing of these new products together with the correct measurement of their associated risks, hedging requirements and profitability.

Management should also investigate thoroughly the methodology traders use to price these new products and to make other supporting calculations. It should assure itself that the procedures used are consistent with both management objectives and current market practices.

Twenty-Four Hour Trading. With foreign exchange trading now taking place on a continuous 24-hour basis, management should be certain that there are adequate control procedures in place for trading that is conducted outside of normal business hours — either at the office or at traders' homes. Management should clearly identify those types of transactions that may be entered into after the normal close of business and should ensure adequate support and accounting control for such transactions. Management should also designate and inform their counterparties of those individuals, if any, who are authorized to deal outside the office. In any case, all confirmations for trades arranged off-premises should be sent promptly to the appropriate staff at the office site.

Increasingly, banks in the United States are receiving, during their workday, requests to trade from dealers operating outside of the counterparty's normal business hours. Management should consider how it wants its own dealers to respond. It is possible that, for selected counterparties, arrangements can be discussed in advance and a *modus operandi* can be established that will accommodate the counterparty's needs and still identify and protect all parties to the transaction.

Stop Loss/Profit Orders. Dealing institutions may receive requests from branches, customers and correspondents to buy or sell a currency if the exchange rate for that currency should reach a specified level. These orders, which include stop/loss and limit orders from trading counterparties that desire around-the-clock protection for their own currency positions, may be intended for execution during the day, overnight, or until executed or canceled.

Management should be sure there is an explicit and mutually-acceptable understanding between the institution and its counterparty about the obligation the institution has assumed in accepting such an order. Moreover, management needs to establish clear policies and procedures for its traders who accept and execute stop/loss and limit orders. These orders create a potential for loss or liability which can be substantial if the order is mishandled within the organization or there is a misunderstanding about some of the terms and conditions concerning the execution and confirmation of the deal.

Management should also insist that any dealer accepting such an instruction have adequate lines of communication with the correspondent so that the dealer can reach authorized personnel in case of an unusual situation or extreme rate movement. This procedure can minimize the possibility that misunderstandings will arise about the circumstances under which these orders should be executed.

DOCUMENT OF ORGANIZATION

CONCLUSION OF FEASIBILITY STUDY TO ESTABLISH FOREIGN EXCHANGE COMMITTEE
(June 1978, as amended October and December 1987)

It was generally agreed that any new forum for discussing matters of mutual concern in the foreign exchange market (and where appropriate off-shore deposit markets) should be organized as an independent body under the sponsorship of the Federal Reserve Bank of New York. Such a Committee should:

1. be representative of institutions participating in the market rather than individuals;
2. be composed of individuals with a broad knowledge of the foreign exchange markets and in a position to speak for their respective institutions;
3. have sufficient stature in the market to engender respect for its views, even though the Committee would have no enforcement authority;
4. be constituted in such a manner as to insure at all times fair presentation and consideration of all points of view and interests in the market, and
5. notwithstanding the need for representation of all interests, be small enough to deal effectively with issues that come before this group.

The objectives of the Committee would be:

To provide a forum for discussing technical issues in the foreign exchange and related international financial markets.

To serve as a channel of communication between these markets and the Federal Reserve and, where appropriate, to other official institutions within the United States and abroad.

To enhance knowledge and understanding of the foreign exchange and related international financial markets, in practice and theory.

To foster improvements in the quality of risk management in these markets.

To develop recommendations and prepare issue papers on specific market-related topics for circulation to market participants and their management.

It is understood that the Committee would seek to work closely with the FOREX and other formally established organizations representing the other relevant financial markets.

The Committee

In response to the results of the study, the Federal Reserve Bank of New York agreed to sponsor the establishment of a Foreign Exchange Committee. It was agreed that:

1. The Committee should consist of no more than 14 members and an equal number of alternates. In addition, the president of FOREX would be invited to participate.
2. Institutions participating in the Committee should be chosen in consideration of their participation in the exchange market here as well as of the size and general importance of the institution. Selection of participants should remain flexible to reflect changes as they occur in the foreign exchange market.
3. Responsibility for choosing member institutions and alternates rests with the Federal Reserve Bank of New York. The Federal Reserve may solicit the advice of current Committee members.
4. Initially, the terms of half of the members will be for two years and half for three. Thereafter, to provide for maximum participation in the Committee by institutions eligible for membership, the term of membership would be two years. It is envisaged that, at the expiration of each member's term, the alternate would succeed to full membership.

The composition of the Committee should be as follows:

5-6 East Coast Banks

2-3 Other U.S. Banks

2-3 Foreign Banks

1-2 Brokers (preferably to represent both foreign exchange and Euro-deposit markets)

the president of the FOREX USA, Inc.

the Federal Reserve Bank of New York

Committee Procedures

There would be a meeting of the Committee with a specified agenda of items at least every alternate month. The format of the discussion, however, would be informal.

In the event that a member is unable to attend a meeting, his alternate may attend.

Any recommendation the Committee wishes to make on items coming to its attention can be discussed and decided upon only at its meetings. Any such recommendation would be distributed not only to member institutions and their alternates, but to every senior officer in charge of the international money desks of every participating institution in the United States.

The Committee will have a standing Membership Subcommittee to aid in the selection and orientation of new members. A representative of the Federal Reserve Bank of New York will serve as chairman of this Subcommittee.

The Committee may designate *ad hoc* working groups to focus on specific issues.

Depending on the agenda of items to be discussed, the Committee may choose to invite other institutions to participate in its discussions and deliberations.

Summaries of discussions at each meeting would be prepared and distributed to market participants generally by the Federal Reserve Bank of New York on behalf of the Committee.

Meetings of the Committee would be held either at the Federal Reserve Bank of New York or at other member institutions.

In addition to the meetings provided for above, a meeting of the Committee may be requested at any time by two or more members.

Responsibilities of Committee Members

The Foreign Exchange Committee membership is composed of institutions who participate actively in the foreign exchange markets as well as other financial markets worldwide. As a senior officer of such an institution, the Committee member has acquired expertise that is invaluable to attaining the Committee's objectives. The member's continuous communication with the markets worldwide generates knowledge which is necessary to the Committee's deliberations of market issues or problems Effective individual participation is critical if the collective effort is to be successful.

The responsibilities of membership apply equally to all associated with the Committee, whether they are serving currently as a formal member or an alternative member.

The specific responsibilities of each member are:

- To function as a communicator to the Committee and to the marketplace on matters of mutual interest, bringing issues and information to the Committee, contributing to discussion and research, and sounding out colleagues on issues of concern to the Committee.
- To represent to the Committee the concerns of his own institution In addition, to reflect the concerns of a market professional as well as the constituency from which his institution is drawn or the professional organization on which he serves.
- To participate in Committee work and to volunteer the resources of his institution to support the Committee's projects and general needs.
- To coordinate between the formal member and the alternate attendance at meetings and to communicate to the absent member on a timely basis the discussions and other items of import that occurred at each meeting. This responsibility is reciprocal within each designated pair of formal and alternate members.

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As this is the tenth Annual Report of the Foreign Exchange Committee, the Committee has herein provided a cumulative index to all previous annual reports, covering the period 1979 - 1987. Future indices will only provide coverage for annual reports commencing with the year 1988.

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